DESERT SOUTHWEST REGION
PARKER-DAVIS & INTERTIE PROJECT
DRAFT 10-YEAR PLAN

Gila-Wellton Mohawk 161-kV Rebuild Under Construction

QUARTERLY CUSTOMER MEETING: JULY 15, 2019
DESERT SOUTHWEST REGIONAL OFFICE
615 S. 43RD AVE, PHOENIX, AZ

Western Area Power Administration

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1.0 MEETING AGENDA

Monday, July 15, 2019 | 1:30 p.m. to 3:30 p.m. Mountain Standard Time (Arizona)

WEBEX VIDEO CONFERENCING AND CALL-IN NUMBER:

- To access the WebEx please click the below link and follow the on-screen prompts.
  CLICK HERE to join the meeting
  Meeting number: 906 271 184
  Meeting password: CPS7GT9b
- To join the conference call, please dial (415) 527-5035. When requested, enter conference code number **906 271 184** and then enter #

OBJECTIVES

- Provide customers with a draft 10-Year Plan (fiscal year 2020 – fiscal year 2029) which describes materials construction projects and rate analysis
- Propose estimated prepayments for construction projects for the Prepayment Funding Meeting held during the 4th quarter
- Provide updates on partially funded construction projects, referred to as seed funded projects
- Provide Analysis of Alternatives (AOA) study updates in the 10-Year Plan pivot process
- Present and discuss materials related to capital O&M budget formulation

AGENDA:

1. Welcome and Introduction
2. Pivot Strategy 2019
3. Draft 10-Year Plan
4. Reserve Balances
5. Seed Funded Project: Bouse Upgrade
6. Parker-Blythe #2 161-kV Rebuild
7. Draft 10-Year Plan Rate Analysis
8. Prepayment Vote Look Ahead
9. Capital O&M Reporting
10. 10-Year Plan Next Steps
    a. **August 15, 2019:** Special Working Session (Webex video conferencing meeting)
    b. **October 30**, **2019**: Final 10-Year Plan Customer Presentation
    c. **December 10, 2019**: Prepayment Vote Customer Meeting

2.0 TABLE OF ACRONYMS

ACSR.....*ALUMINUM CONDUCTOR STEEL REINFORCED*
AOA.....*ANALYSIS OF ALTERNATIVES*
BLM.....*BUREAU OF LAND MANAGEMENT*
CIP.....*CRITICAL INFRASTRUCTURE PROTECTION*
DSW.....*DESERT SOUTHWEST REGION*
EA.....*ENVIRONMENTAL ASSESSMENT*
FY.....*FISCAL YEAR*
GFE.....*GOVERNMENT FURNISHED QUIPMENT*
KCMIL.....*THOUSANDS CIRCULAR MILS*
KV.....*THOUSAND VOLTS*
LiDAR.....*LIGHT DETECTION AND RANGING*
MDCC.....*MAINTENANCE DESIGN CONSTRUCTION COMMITTEE*
MVA.....*MEGA VOLT AMP*
NEPA.....*NATIONAL ENVIRONMENTAL POLICY ACT*
NERC.....*NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION*
NESC.....*NATIONAL ELECTRICAL SAFETY CODE*
O&M.....*OPERATIONS AND MAINTENANCE*
OPGW.....*OPTICAL OVERHEAD GROUND WIRE*
OGW.....*OVERHEAD GROUND WIRE*
P-DP.....*PARKER-DAVIS PROJECT*
ROW.....*RIGHT-OF-WAY*
RRADS.....*REPLACEMENTS, RETIREMENTS, & ADDITIONS*
WAPA.....*WESTERN AREA POWER ADMINISTRATION*

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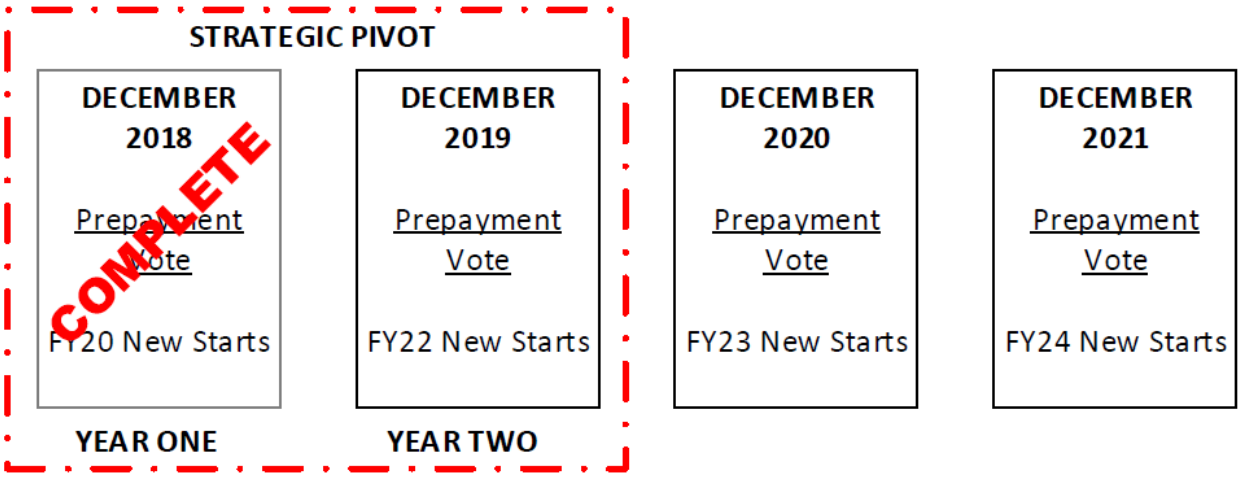
4.0 PIVOT STRATEGY 2019

4.1 What Is The 10-Year Plan Pivot?

The pivot is a strategic one-time shift in the 10-Year Plan process that requires simultaneous approval of multiple upcoming capital improvement projects across several years. The pivot will span two 10-Year Plan cycles (two calendar years) and incorporate simultaneous prepayment funding approvals across fiscal years (FY) 2019 - 2022. A successful pivot will conclude in December 2019 at the Prepayment Funding Meeting. Upon completion, the 10-Year Plan will be in alignment with the Federal budget formulation Process such that prepayment funding will be approved two years in advance of the start of new projects.



Prepayment Vote Schedule. ***NOTE:*** *No New Project Starts in Fiscal Year (FY) 2021*

4.2 Why Do We Need to Pivot?

The federal budget formulation process begins two fiscal years prior to the execution year (current year). Historically, conducting the prepayment funding vote in the same year as the proposed construction start creates inconsistencies and unpredictability in the execution of Western Area Power Administration's (WAPA) annual budget, which is formulated two years prior. The result is last minute modifications to resource allocations in order to compensate for budgetary swings. Historically, the two year period between budget formulation and prepayment funding approval was prone to changes and fluctuation due to competing priorities and uncertainty of approved prepayment funding. By aligning the customer prepayment vote with the budget formulation process, WAPA can improve accuracy, consistency, and predictability of its budget formulation and execution with a pivot process. The alignment of capital planning with budget formulation improves the planning accuracy of the 10-Year Plan.

4.3 Benefits

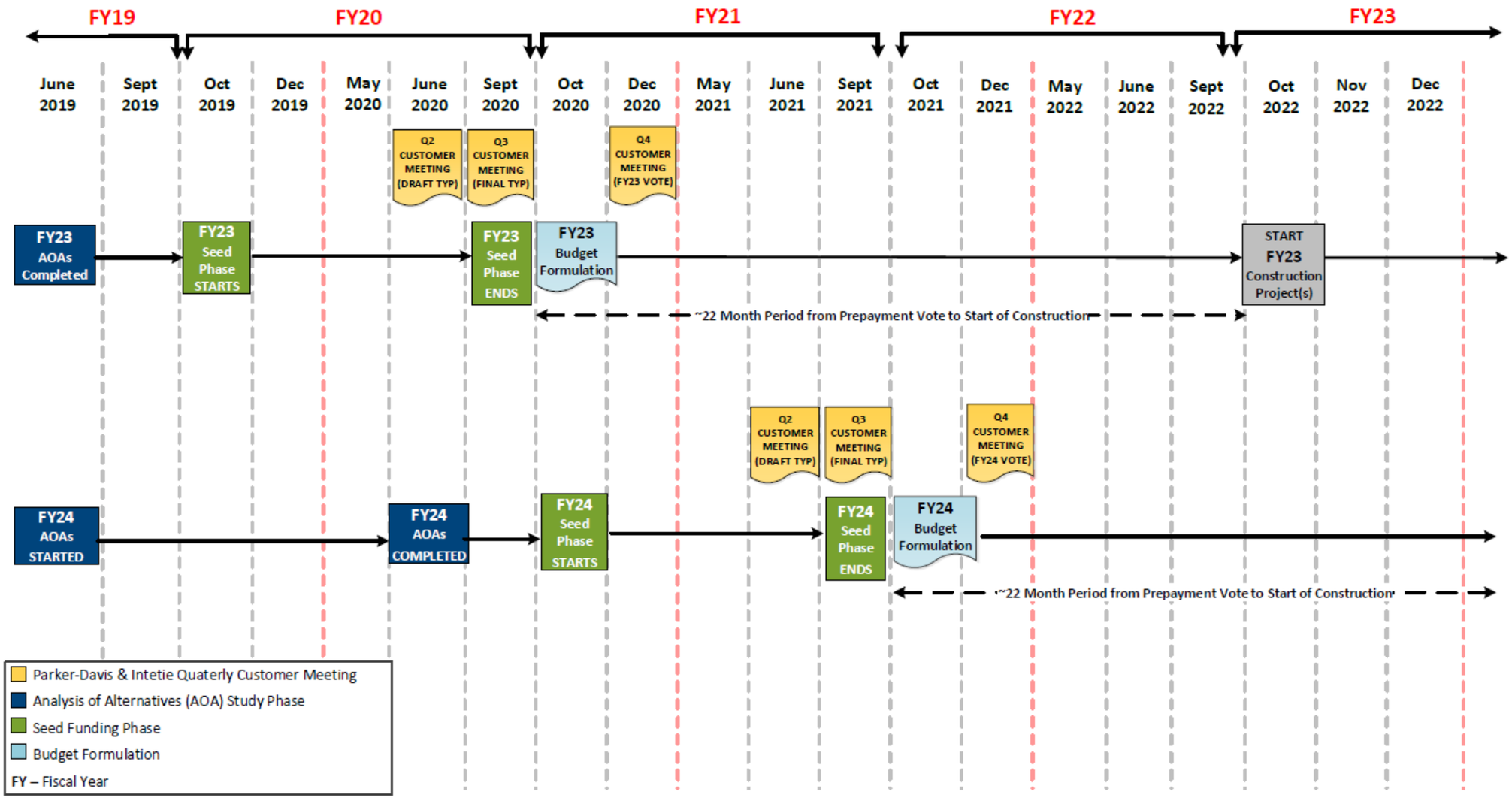
As a result of a successful pivot, the customers will gain additional input into Analysis of Alternatives (AOA) study prioritization, planning, and results. Previously the AOAs were performed concurrent with the budget formulation process, such that opportunities for customer input/engagement were limited. The strategic plan to pivot will provide customers with capital planning information in advance of budget formulation, therefore allowing sufficient time for WAPA to develop diverse, viable, and economical investment alternatives for consideration.

4.4 Post-Pivot Planning Schedule

Western Area Power Administration

DSW 10-Year Capital Plan
POST-PIVOT SCHEDULE

AS OF OCTOBER, 2019 → Calendar Year: 2019 Fiscal Year: 2020 Budget Formulation: FY23 AOA Study Formulation: FY24 New Starts



5.0 DRAFT 10-YEAR PLAN (Fiscal Year 2020-2029)

5.1 Background

The Draft 10-Year Plan spreadsheet presents budgets for each individual project and is separated into the Parker-Davis Project or Intertie Project, respectively. The individual project budget, also referred to as a spend plan, shows the total amount of required annual funding for each year a project is active. Spend plans are provided for each active construction project, partially funded seed project(s), and future projects within fiscal year 2019-2029.

WAPA's fiscal year starts on October 1st and concludes on September 30th. For the Draft 10-Year Plan, WAPA is planning capital investments for fiscal years 2020 through 2029. However, because fiscal year 2019 is still in progress, this partial fiscal year is also included in the 10-Year Plan for visibility.

The 10-Year Plan is also color-coded to differentiate between spend plan (budget) accuracy levels. Each color coded category represents a unique spend plan confidence level dependent on what phase of the process the project resides.

For example, when a project request is initiated the spend plan estimate accuracy is +/- 100%, or zero confidence, as only a mission need has been identified with no preferred scope identified. As the project scope evolves through conceptual design, the estimate accuracy improves to +/- 30% by means of an AOA. Once an AOA study is complete, a preferred alternative is identified and the project is handed off for partial funding, otherwise known as seed funding, which is currently funded by appropriations.

In the seed funding phase, formal design efforts are initiated with the goal to achieve 50-75% complete drawings & specifications (partial design package). At the conclusion of the seed funding phase, the estimate accuracy again improves with a target +/- 20% spend plan (budget) accuracy. Once the design package is finalized and ready for procurement, the expectation is that the project spend plan (budget) is +/- 5% accuracy as active construction begins.

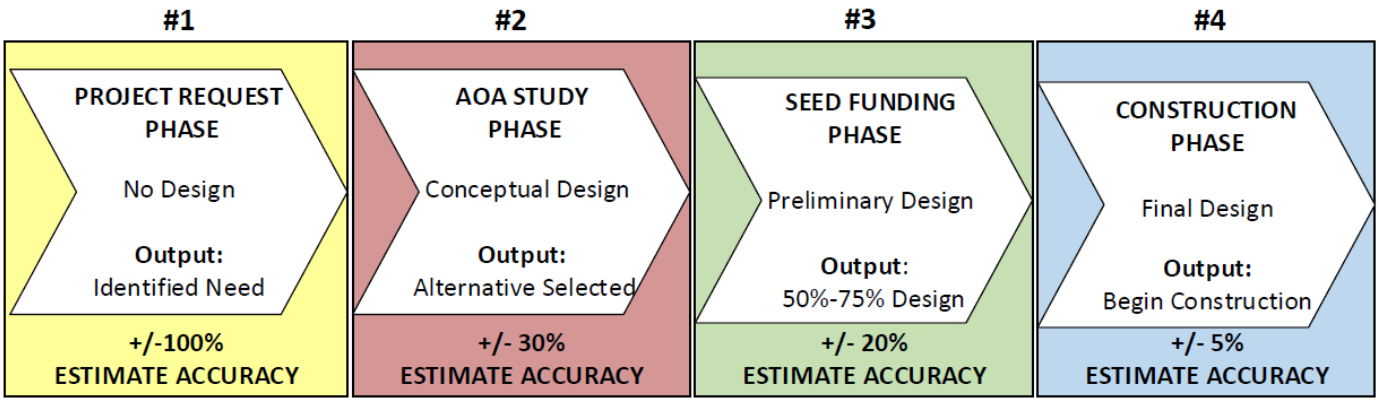


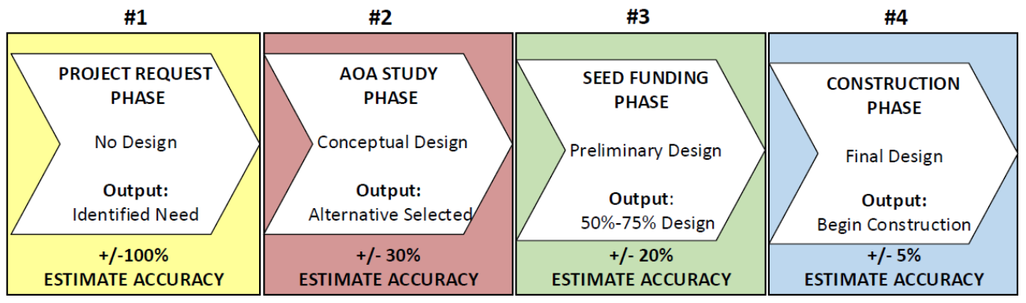
Figure 1 - Project Phases with Color-Coded Estimate Accuracy Indicators

5.2 Fiscal Year 2020-2029 Spend Plans

Parker-Davis Project 10-Year Spend Plans (Costs in Thousands of Dollars)

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
PROJECT	TOTAL BUDGET	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
Tucson Substation Rebuild	9,836	80										
Gila-Knob 161-kV T-Line Reroute	3,707	8										
Black Point Mesa Reroute	2,262	28										
Parker-Davis Facility Rating Year 2	7,711	50										
Crossman Peak Microwave Facility	4,525	3,032	50									
Gila Substation 161-kV to 230-kV Rebuild	22,291	1,344	1,637									
Gila-Wellton Mohawk I-8 Crossing Rebuild	7,520	196	26									
Coolidge-Valley Farms 115-kV Rebuild	3,350	1,536	719	50								
Gila-Dome Tap 161-kV Rebuild	7,630	2,328	1,126	2								
Kofa-Dome Tap 161-kV Rebuild	5,511	350	4,000	851	50							
Bouse Upgrade Project	45,088	459	1,000	18,128	14,711	835	7,659	1,939				
Bouse-Kofa 161-kV Rebuild PHASE-1	13,260		407	7,172	5,132	456						
Bouse-Kofa 161-kV Rebuild PHASE-2	13,260		500		7,172	5,132	456					
Parker-Blythe #2 161-kV Rebuild Phase-1	18,542				237	17,336	805	164				
Parker-Blythe #2 161-kV Rebuild Phase-2	18,542				237		17,336	805	164			
Parker-Blythe #2 161-kV Rebuild Phase-3	18,542				237			17,336	805	164		
Parker Substation 161-kV Replacements	16,850							300	8,000	7,700	850	
Blythe-Headgate Rock #1 line 161-kV Rebuild	23,900							1,195	9,560	11,711	1,434	
Parker Substation 230-kV Replacements	12,100								600	2,000	9,900	500
Gila Substation 69-KV	10,500									800	6,050	3,200
Gila Knob 161-kV Remaining Rebuild	23,000										800	16,700
Gila Substation 34.5-kV / 14-KV	15,250											500
FISCAL YEAR (FY) TOTALS		**9,411**	**9,465**	**26,203**	**27,776**	**23,759**	**26,256**	**21,739**	**19,129**	**22,375**	**19,034**	**20,900**
TOTAL COST OF COMPLETED PROJECTS BY YEAR (RATE IMPACT)		**23,516**	**34,336**	**10,980**	**5,511**	**13,260**	**13,260**	**63,630**	**18,542**	**18,542**	**40,750**	**12,100**

Note: *Fiscal Year 2019 represents spend plans for anticipated cost from May 1, 2019 through September 30, 2019 only.*

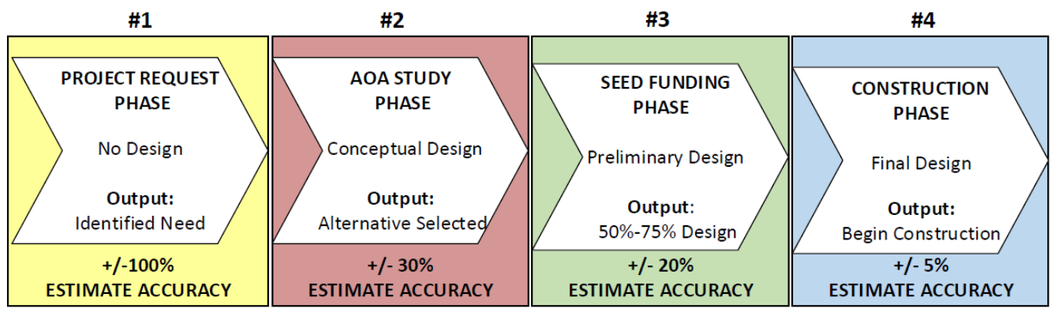


Intertie Project

10-Year Spend Plans (Costs in Thousands of Dollars)

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
PROJECT	TOTAL BUDGET	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
Liberty Series Capacitor Bank Replacement	10,372	2,622	76									
FISCAL YEAR (FY) TOTOLS		**2,622**	**76**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL COST OF COMPLETE PROJECTS BY YEAR (RATE IMPACT)		**0**	**10,372**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: *Fiscal Year 2019 represents spend plans for anticipated cost from May 1, 2019 through September 30, 2019 only.*



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6.0 SEED FUNDED PROJECT: BOUSE UPGRADE

6.1 Project Description

Power System: Parker-Davis Project

Project Request Phase	AOA Study Phase	Seed Funding Phase	Active Construction Phase

Project Location =

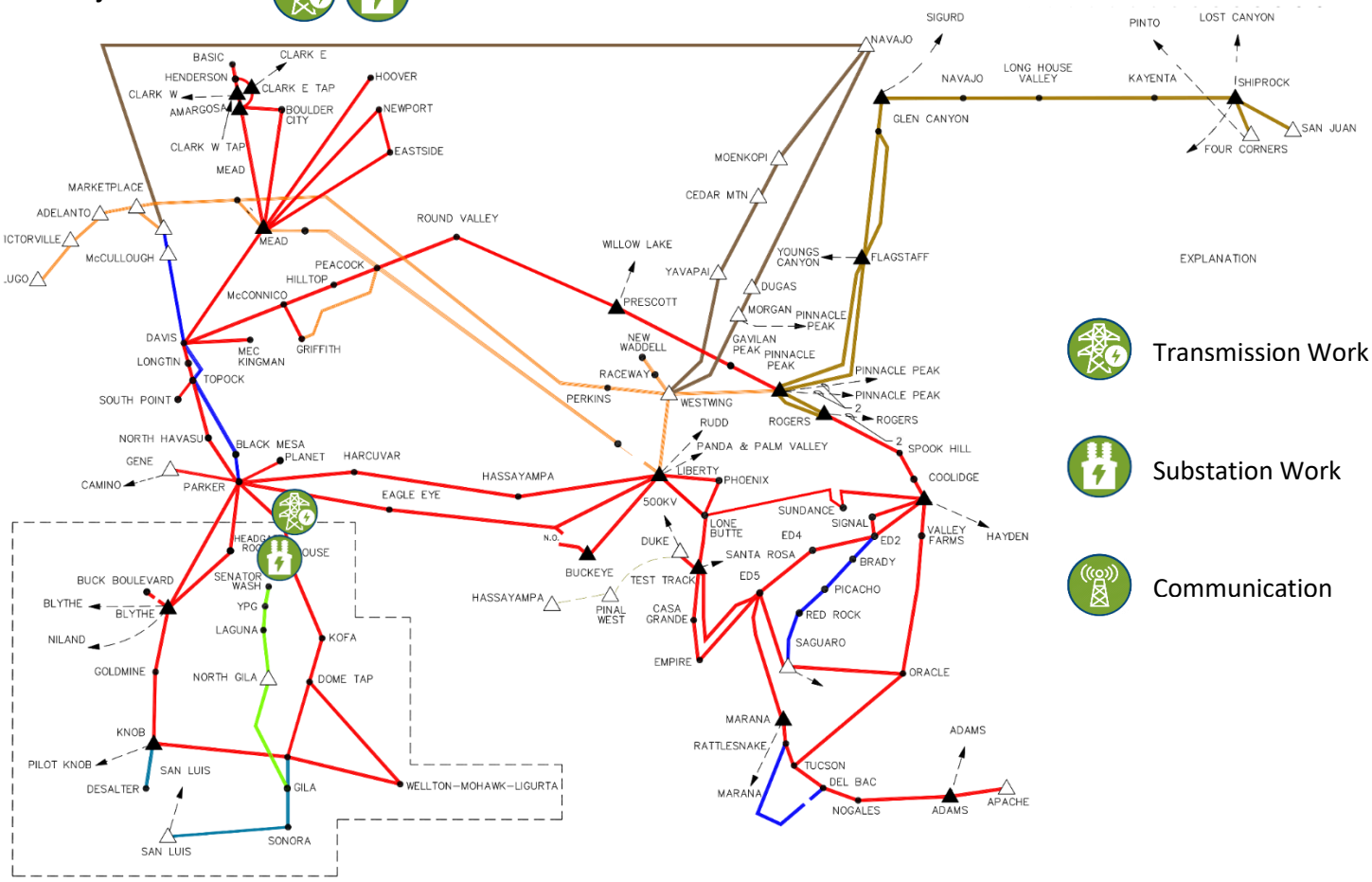


Figure 2 - System Configuration with Project Location

The Bouse Upgrade AOA study was completed in the summer of 2018 as part of the 10-Year Plan Pivot. Beginning in October 2018, WAPA initiated seed funding for this proposed project with appropriated funding in the amount of $816,000. The objective of the seed funding phase is to begin preliminary design, produce a refined project estimate for prepayment customer review, and consider full project funding with prepayments. In this section, details and information from the AOA study and the in progress seed funding phase are provided.

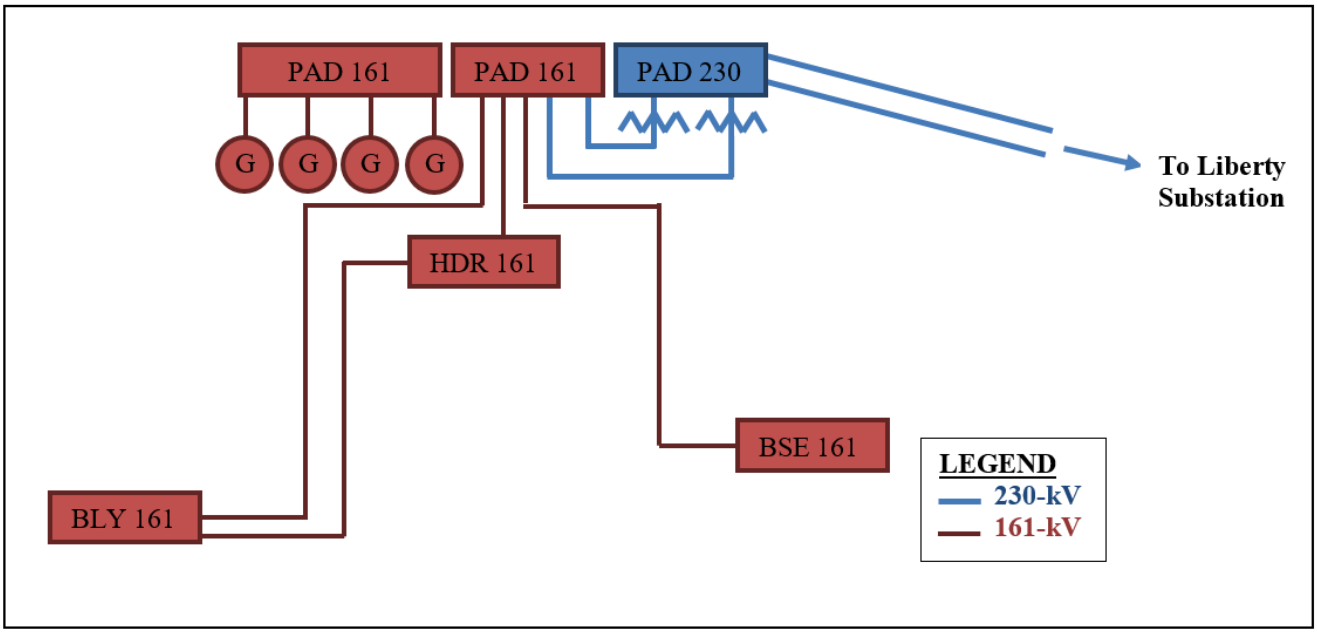


Figure 3 - Circuit Diagram of Existing South of Parker System Configuration

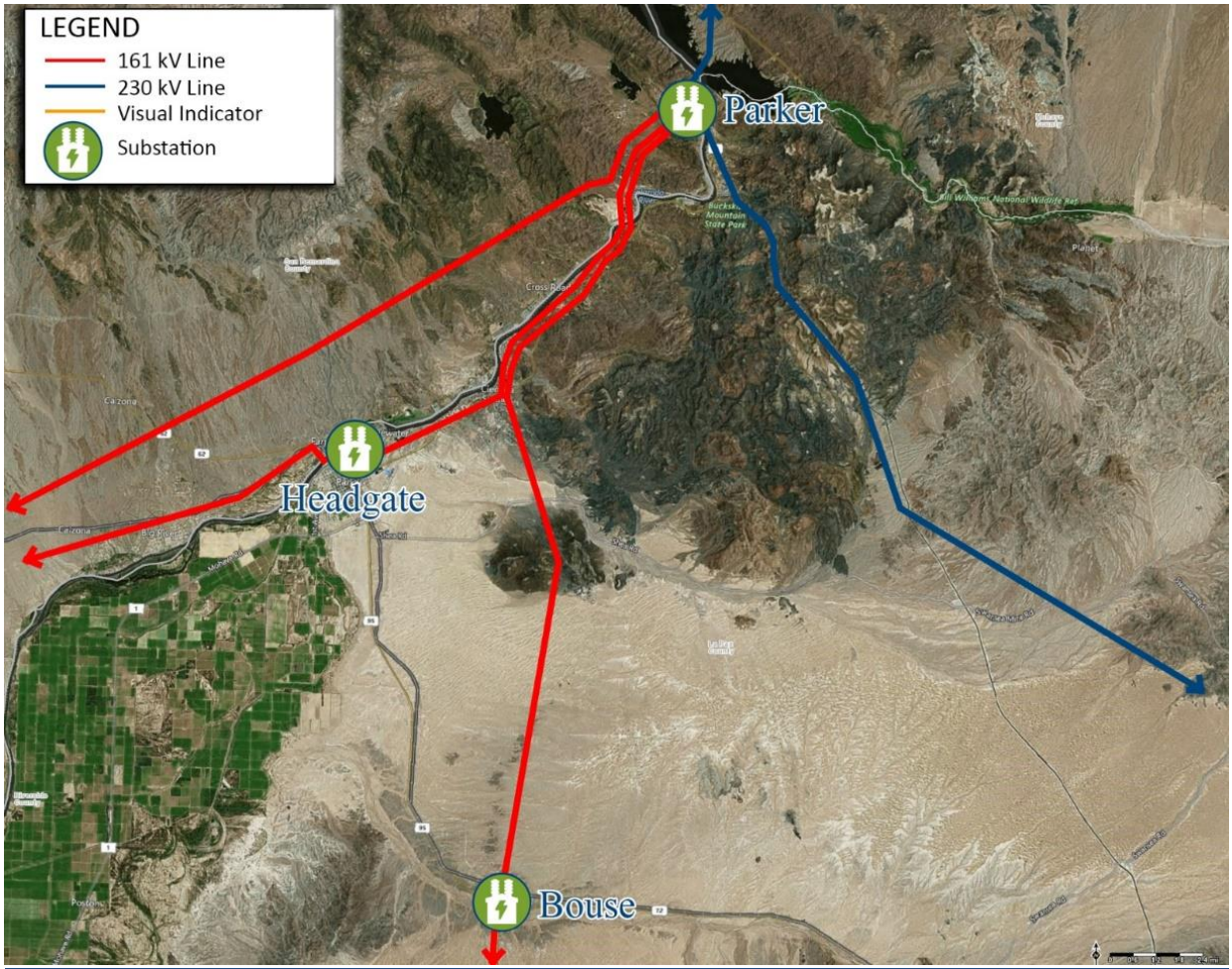


Figure 4 - Current System Configuration South of Parker, AZ

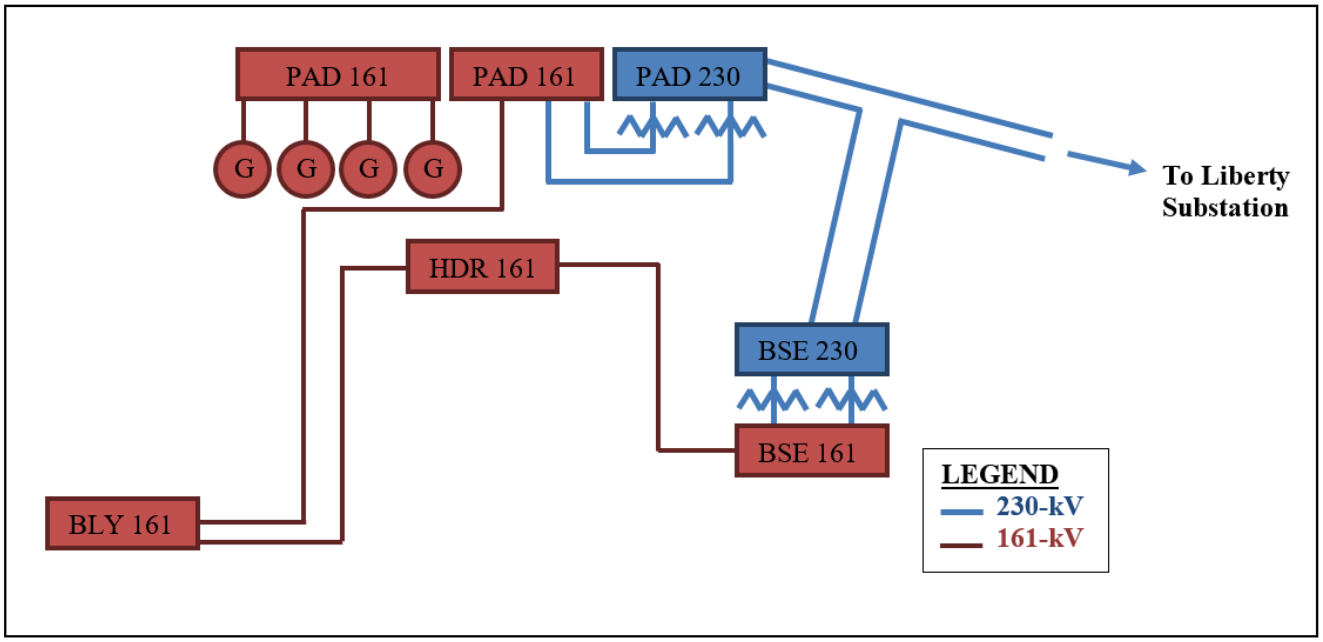


Figure 5 – Circuit Diagram of Proposed Bouse Upgrade Configuration

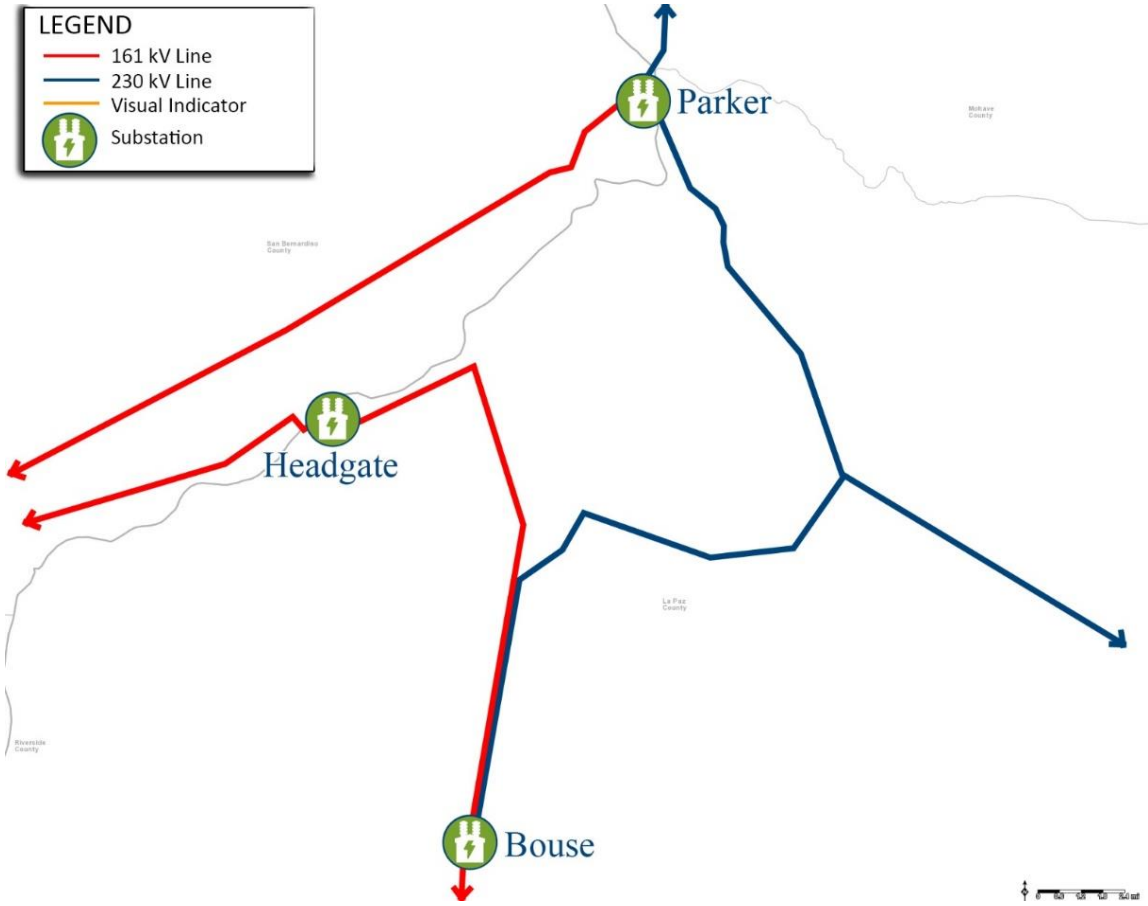


Figure 6 - Proposed Bouse Upgrade Configuration

6.2 Project Scope Highlights

For planning purposes, the Bouse Upgrade Project is presented as a single project throughout 10-Year Plan materials. However, it is WAPA's intent to split this project into phases to mitigate unnecessary upward rate pressure. Final phasing information will be available at the end of the seed funding phase.

CONCEPTUAL PHASE ONE: Build a new 230-kV transmission line

- Construct 18 miles of new double circuit 230-kV transmission line from Bouse Substation to existing Parker-Liberty #2 transmission line
- Results in redirection of Parker-Liberty 230-kV line through Bouse Substation
- Approximately 120 steel structures
- Proposed 1272 KCMIL ACSR conductor or most economical to support load
- One overhead ground wire and one overhead optical ground wire
- Construct across flat, unpopulated, BLM land

CONCEPTUAL PHASE TWO: Expand Bouse Substation

- Bouse Substation was rebuilt in 2012 to 230-kV standards, operated at 161-kV
- Three breaker ring-bus configuration
- Renovate into a 161-kV double-breaker-double-bus configuration
- Add two 230-kV bays in 4-breaker ring-bus configuration with two 230/161-kV transformers

CONCEPTUAL PHASE THREE: Connect Headgate Rock to Bouse utilizing a Jumper

- Install jumper between a new dead-end structure on the existing Parker-Headgate Rock 161-kV line with one new dead-end structure on the existing Parker-Bouse 161-kV line
- Connect Bouse to Headgate Rock using a new jumper
- New Headgate Rock-Bouse 161-kV line is established

CONCEPTUAL PHASE FOUR: Remove 20 miles of transmission line

- Remove 10 of the 14 miles of single circuit line from Parker Substation towards Headgate Rock Substation
- Remove 10 of the 22 miles of existing single circuit line from Parker Substation towards Bouse Substation
- Relinquish existing right-of-way (ROW) through Parker strip

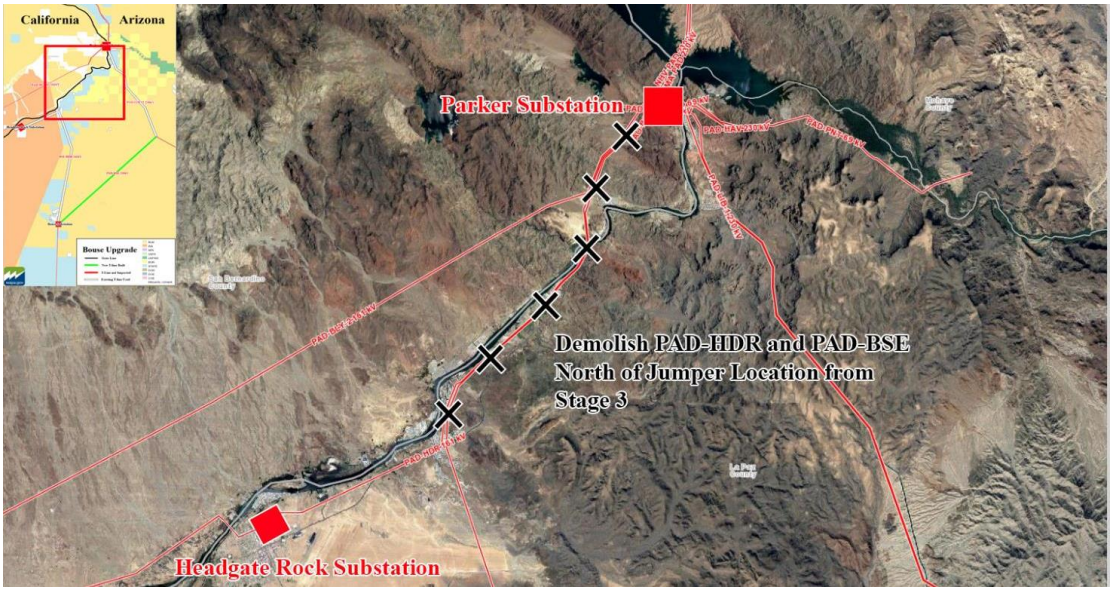


Figure 5 - Removal of Two Parallel 10-Mile Single Circuits

6.3 Project Updates

WAPA has engaged both its environmental and lands groups to analyze the transmission line corridor and begin the Environmental Assessment (EA) process. In doing so, WAPA has discovered several areas to avoid as protected wilderness areas, as shown in Figure 6. This is an excellent example of why WAPA is now including its environmental group in the AOA study phase and seed funding process, as it allows the identification of environmental and lands constraints prior to entering construction that previously would have caused potential delays and additional costs.

The seed phase has also identified that the two originally proposed locations for the jumper, required to connect the existing Headgate Rock-Parker line to the Bouse (BSE)-Parker (PAD) line, in the AOA study, are not feasible. Identifying this siting issue early will prevent delays in the design and construction of the project.

To aid in the development of the design, WAPA is pursuing LiDAR survey data and geotechnical analysis along the new proposed transmission line corridor. This data is crucial in developing the project cost estimate prior to seeking full project funding in the December 2020 Prepayment Funding meeting.

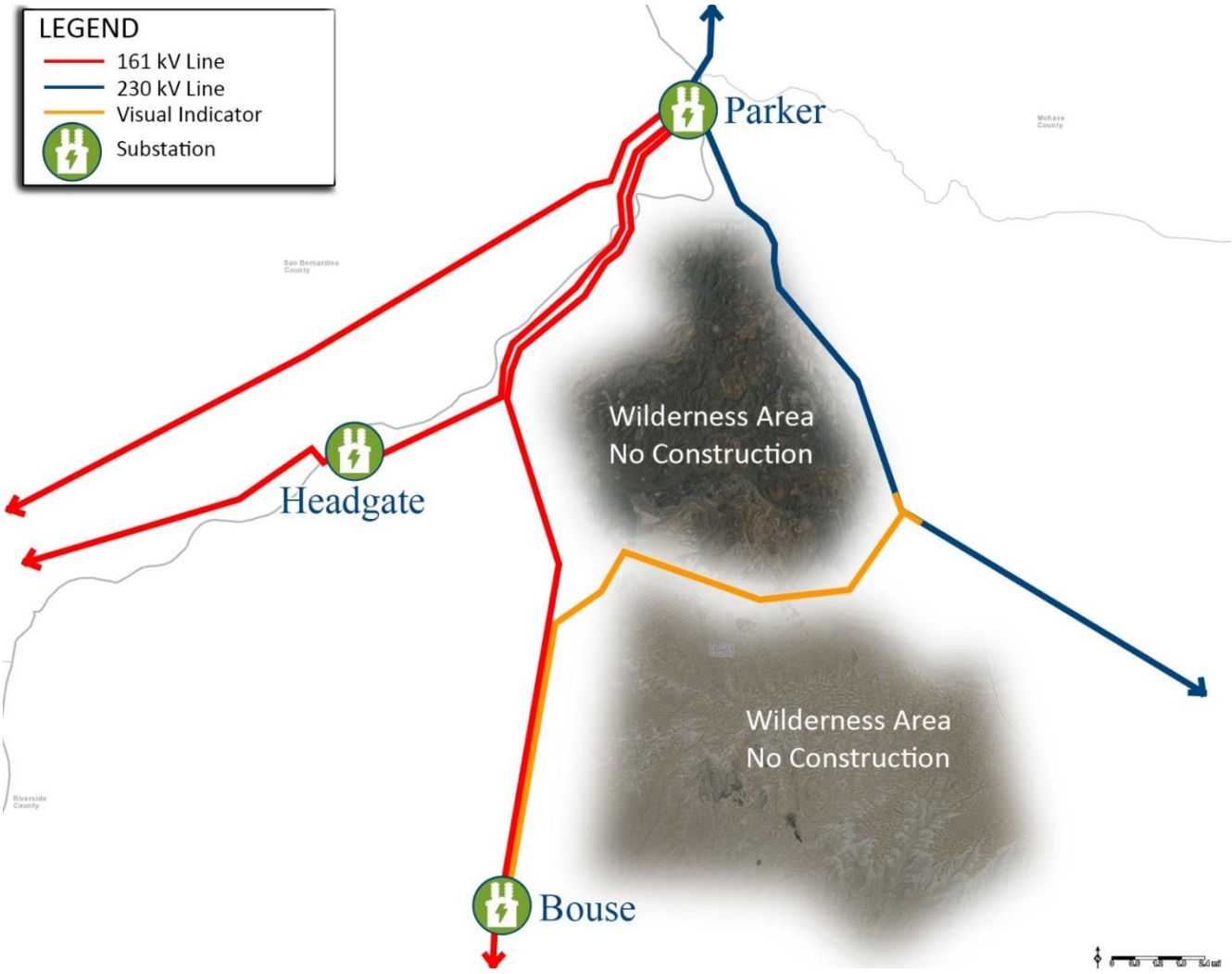


Figure 6 - Wilderness Areas Identified During Seed Funding Phase

6.4 Seed Phase Schedule

The Bouse Upgrade Project was originally projected to go to prepayment vote for full project (all phases) funding in December of 2019, approximately one year after the start of the seed funding phase. However, design could not begin until aerial LiDAR and geotechnical analysis data were available, both of which were subject to delay due to the government shutdown. The government shutdown impacted the start of the seed phase by limiting WAPA's coordination effort with the Bureau of Land Management (BLM) through early 2019. WAPA anticipates the LiDAR and geotechnical data will be available in June, 2019.

These developments, coupled with the magnitude of the project, have prompted WAPA to extend the seed funding phase by one year, with a prepayment vote scheduled for December of 2020. There are critical factors contributing additional time proposed in the seed funding phase. First, there is extensive coordination and cooperation required with the BLM due to the nature of building on a new right-of-way. This includes substantial investigation into environmental and cultural sensitivities within the area of the proposed project prior to design. Secondly, it is critical to allow additional time for engagement with external stakeholders on the status and development of the project scope.

6.5 Project Financial Summary

FUNDING TYPE	ORIGINAL BUDGET	BUDGET ADJUSTMENT 2019	CURRENT BUDGET	COST TO DATE	REMAINING FUNDS	ADDITIONAL FUNDS REQUIRED
Prepayment	$ -	$ -	$ -	$ -	$ -	$ -
Appropriations	$ 816,000	$ -	$ 816,000	$ 357,000	$ 459,000	$ -
TOTAL	**$ 816,000**	**$ -**	**$ 816,000**	**$ 357,000**	**$ 459,000**	**$ -**
**Cost = All Executions, Obligations, & Commitments Through 4/30/19*						

6.6 Conceptual Project Milestones

PROJECT MILESTONE	STATUS	DATE
Seed Funded	Completed	Q4 2018
Approved Prepayment Funding	Projected	Q4 2020
Design Completed	Projected	Q4 2020
Construction Mobilization	Projected	TBD
In-Service / Energization	Projected	TBD
Financial Closeout	Projected	Q4 2025

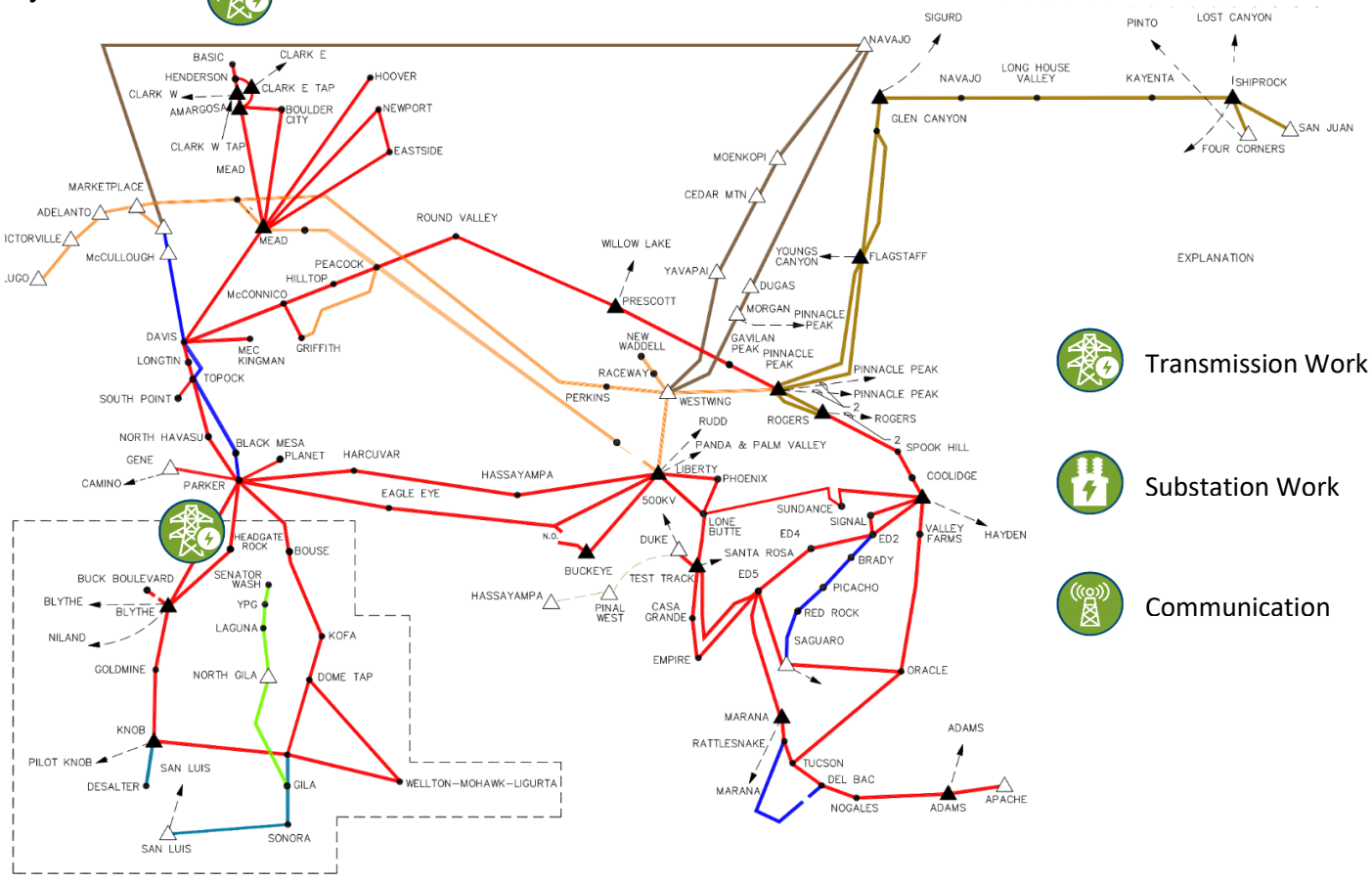
7.0 PARKER-BLYTHE 161-kV #2 REBUILD

7.1 Project Description

Power System: Parker-Davis Project

Project Request Phase	AOA Study Phase	Active Construction Phase

Project Location =



The Parker (PAD) to Blythe (BLY) number two 161-kV transmission line was built in 1969 and runs along the Colorado River in eastern California. The transmission line is 63.9 miles long utilizing 954 KCMIL ACSR conductor and two steel overhead ground wires supported on wooden H-frame structures with 3-pole wooden structures at angle points and dead-ends.

During the proposed rebuild project, all wood H-Frame structures would be replaced with new light duty steel H-Frame structures. Steel dead-end structures would be installed at approximately five to ten mile intervals to mitigate the risk of cascading failure. The rebuild would also include new conductor, overhead ground wire,

optical ground wire, insulators and hardware. All structures would be installed using 230-kV clearances and standards. The line would be operated at 161-kV until future demand required conversion to 230-kV.

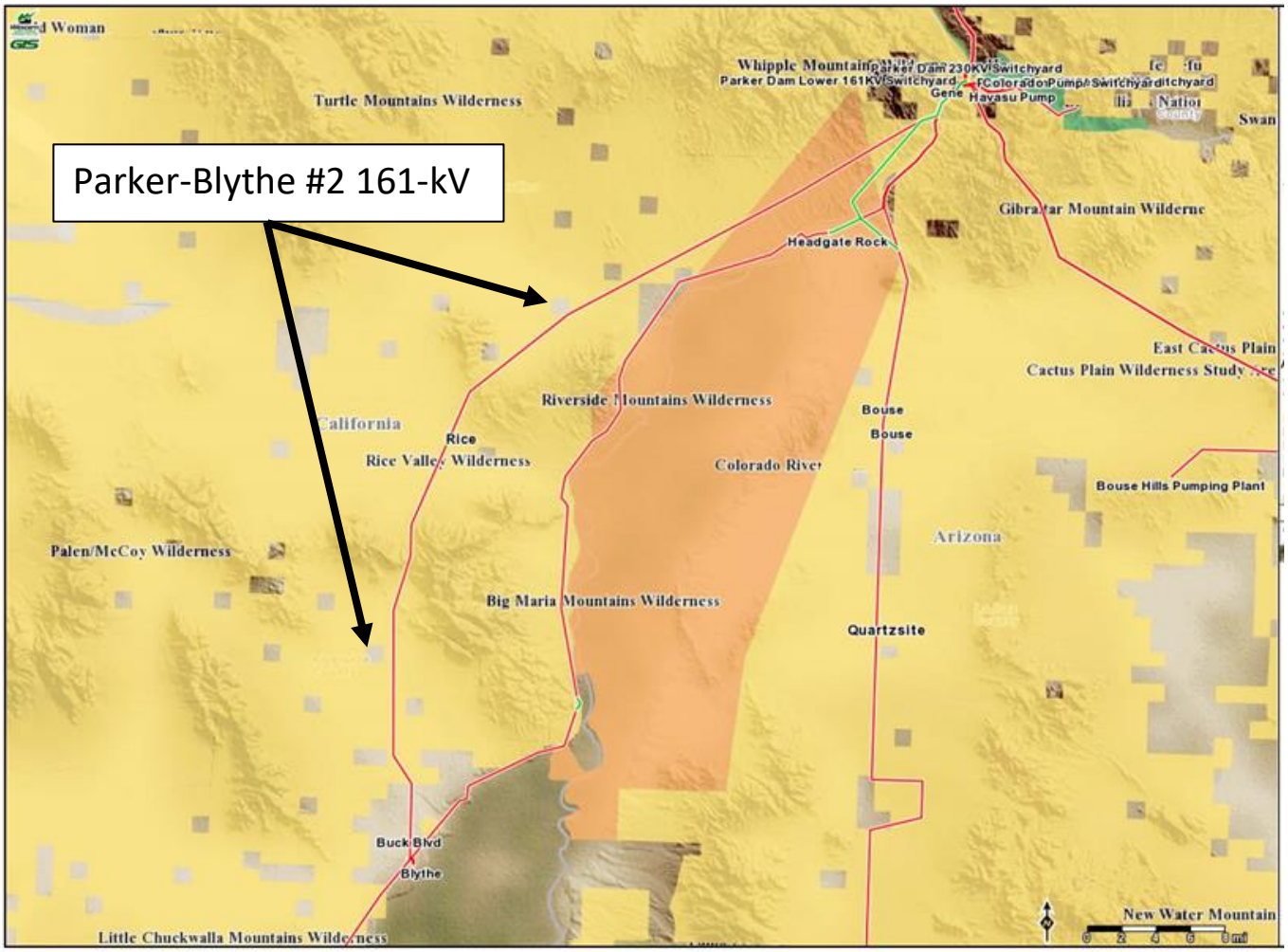


Figure 7 - Parker-Blythe #2 Area Map

7.2 Project Justification

An AOA study was performed in 2017 to identify various performance gaps and deficiencies associated with this line segment and identify viable, diverse, and economical alternatives.

Identified performance gaps and deficiencies:

- Eighty percent (~881 poles) of the wood poles on the line segment require repair/replacement
- Conductor, insulators, and hardware are 49+ years old
- NERC/NESC violations have been identified and need to be corrected
- Access road(s) and right-of-way availability and conditions are sub-par
- Lack of fiber optic ground wire to meet current and future protection, control, communication and security requirements

Rehabilitation of the PAD-BLY 161-kV Transmission line is needed to ensure the safe, secure, reliable and affordable energy and transmission services to our customers. Rehabilitation would include:

- Replacement of all wood poles with light-duty steel H-frame structures
- Install dead-ends at intervals of less than 10 miles to prevent cascading failures
- Correct all NERC/NESC violations that have been identified
- Repair access roads as needed to construct this project
- Install fiber optic ground wire to meet current and future protection, control, communication and security requirements

NERC/NESC Violations:

There are five cases of phase-to-ground clearances not meeting the minimum clearance required by the NESC and NERC that need to be corrected.

Transmission Line Condition:

The PAD-BLY transmission line is 49 years old and eighty percent of its supporting structures need replacement or repair as identified by detailed ground inspection and Polux® wood fiber strength testing.

Figure 8 - Parker-Blythe #2: Signs of Significant Pole Degradation and Heart Rot

Figure 9 - Parker-Blythe #2: Signs of Significant Pole Degradation and Heart Rot

Access Roads and ROW:
GIS data and inspection field reports shows the condition of the ROW access road is sandy, eroded, or steep. A detailed ground inspection of the PAD-BLY transmission line identified ~20% of the structures (103 out of 523) require vehicles be towed in by a bulldozer for access.

Communication Requirements:
The PAD-BLY transmission line does not have OPGW installed. OPGW has the added benefit of drastically increasing total bandwidth for data transfer versus power line carrier or point-to-point microwave systems. WAPA's security is currently in the process of installing live feed video cameras and IT networks at substations. The addition of these systems will tax or bypass the current communications bandwidth provided by the existing communication networks in place.

7.3 Conceptual Project Phasing

Parker-Blythe #2 161-kV Rebuild, Phase I, Phase II, and Phase III

Figure 10 - Proposed Parker-Blythe 161-kV Rebuild Project Phasing Map

Phase I
Design and construct 21 miles of 161-kV transmission line from Parker Substation to structure 20-8. Design includes replacing 160 wood structures with new light duty steel H-Frame structures, installing new conductor, one new OGW, one new OPGW, and new hardware and insulators. Design typically includes installing steel dead-end structures every 5 to 10 miles to prevent cascading failure. The line would be designed to 230-kV standards and specifications but operated at 161-kV.

Phase II
Design and construct 21.75 miles of 161-kV transmission line from structure 20-8 to structure 41-7. Design includes replacing 181 wood structures with new light duty steel H-Frame structures, installing new conductor, one new OGW, one new OPGW, and new hardware and insulators.
Design typically includes installing steel dead-end structures every 5 to 10 miles to prevent cascading failure. The line would be designed to 230-kVstandards and specifications but operated at 161-kV.

Phase III
Design and construct 21.25 miles of 161-kV transmission line from structure 41-7 to Blythe substation. Design includes replacing 182 wood structures with new light duty steel H-Frame structures, installing new conductor, one new OGW, one new OPGW, and new hardware and insulators. Design typically includes installing steel dead-end structures every 5 to 10 miles to prevent cascading failure. The line would be designed to 230-kV standards and specifications but operated at 161-kV.

7.4 New Potential Alternative to PAD-BLY #2 Rebuild

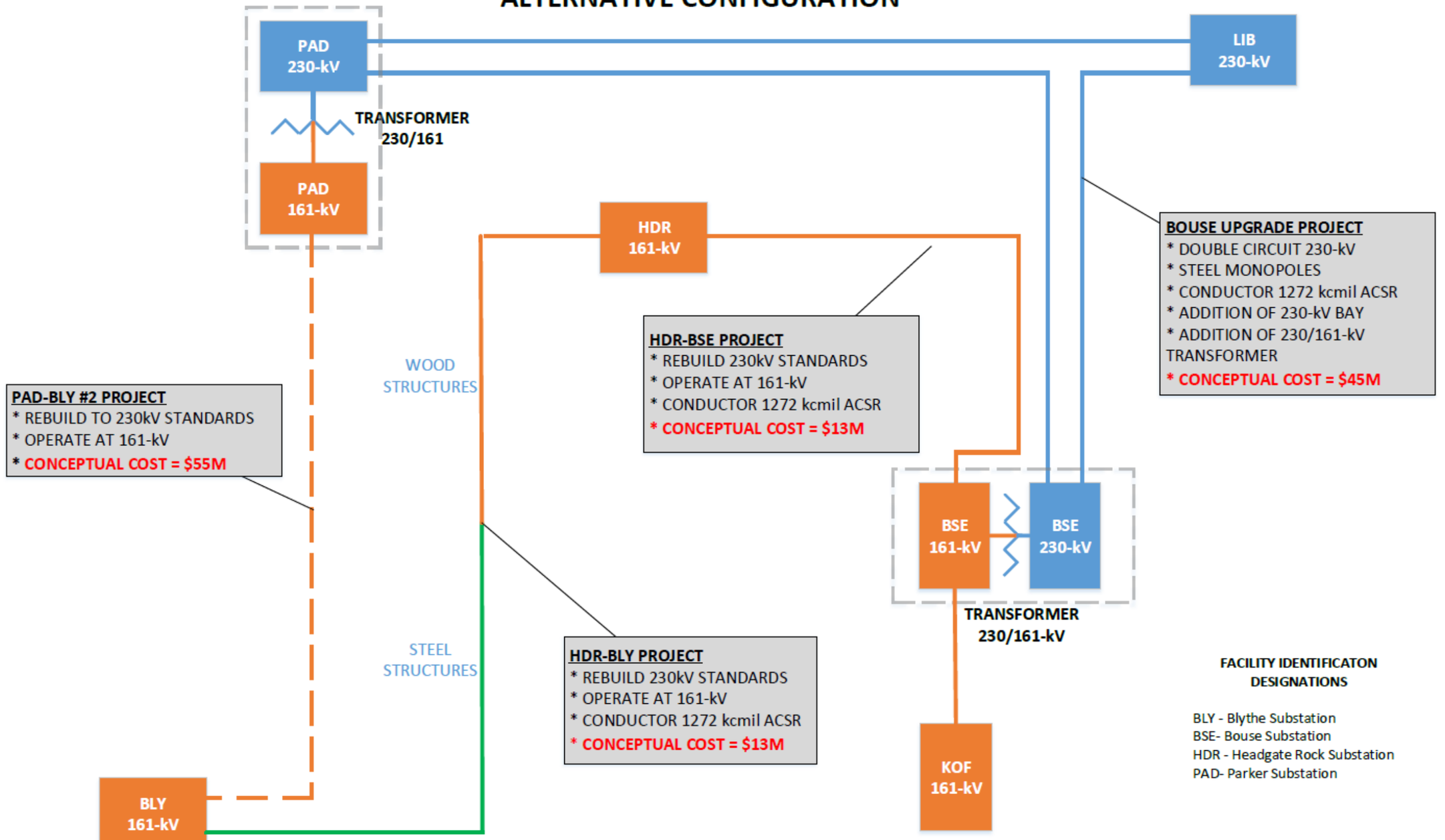
As a result of design developments in the seed funding phase of the Bouse Upgrade project, WAPA discovered a new potential alternative that could result in a net cost savings to the current 10-Year Plan. Based on preliminary transmission planning studies, the PAD-BLY #2 line may not be required to service existing load and scheduling demands if the Bouse (BSE)-Headgate Rock (HDR)-Blythe (BLY) transmission line is rebuilt with sufficient capacity.

Funds currently projected for the PAD-BLY #2 Rebuild Project could be redirected to a new BSE-HDR rebuild and the existing HDR-BLY rebuild (currently on the 10-Year Plan as an FY 2025 project start). Several AOA studies would need to be performed to fully evaluate this alternative in making a data driven capital investment decision.

The following page outlines the configuration of the proposed alternative. However, there are a number of variables with respect to the scope and voltage of the proposed configuration. The specific scope and details will not be available until AOA studies are underway.

WAPA is proposing a special working session in August 2019, to provide additional details and determine customer interest. The special working session would be a WebEx, video conferencing meeting where technical details and various scope options could be discussed collaboratively between WAPA and its customers.

PARKER-BLYTHE #2 REBUILD
ALTERNATIVE CONFIGURATION



7.5 Wood Pole Health Report

Western Area Power Administration
Geographic Information System

June 3, 2019 PAD-BLY-2 161kV G5200 Maintenance Report

Maintenance Performed in 2019

	Arm/Bridge	Brace	Crossarm	Foundation	Guy	Insulator	Phase/Conductor	Pole	Pole Hardware	Signs	Static Wire	TOTALS
Adjusted/Modified												0
Repaired												0
Replaced												0
TOTALS	0	0	0	0	0	0	0	0	0	0	0	0

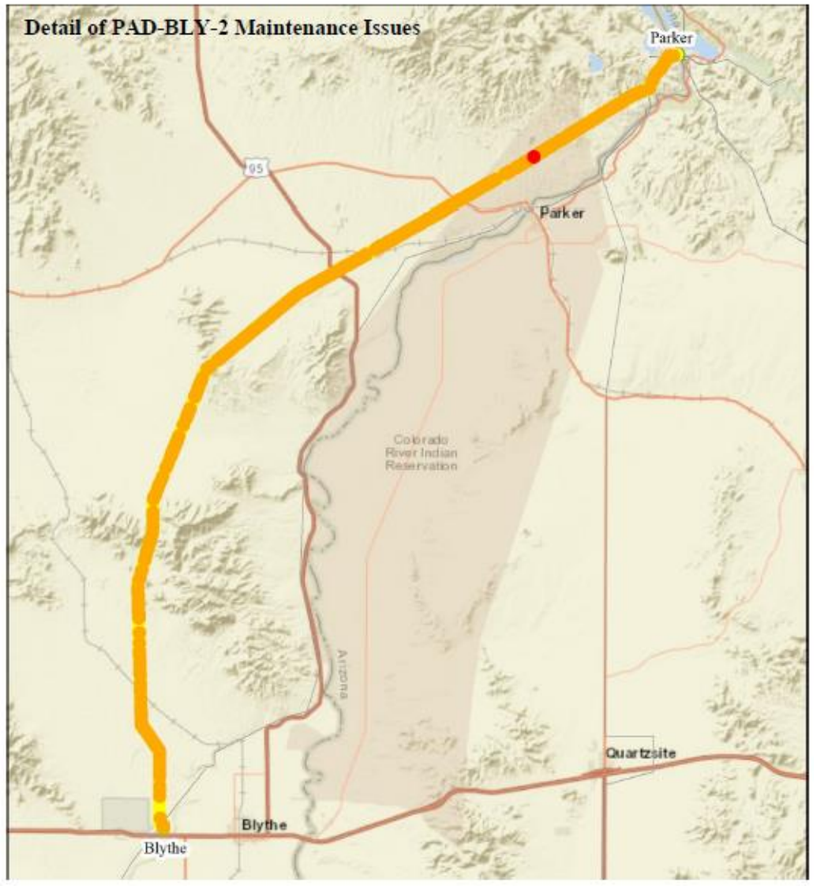
Note: Totals include RADDS projects and maintenance items.

Current Status

Row Labels	A	B	C	D	E	Grand Total
Anchor			18			18
Brace		11	182	6		199
Crossarm		223	80	14		317
Foundation		1				1
Guy		5	31			36
Insulator		12	38	1		51
OPGW			1			1
Phase/Conductor			1			1
Pole		41	475	400	1	917
Pole Hardware			11	2		13
Signs			13			13
Static Wire			4	2		6
Structure	1					1
Vibration Damper			4			4
Grand Total	1	293	858	425	1	1578

Maintenance Priority Codes

A	Good or like new. No action required.
B	Minor defect. Monitor degradation.
C	Moderate defect. Rehabilitation or replacement recommended as scheduled maintenance.
D	Serious defect. Repair, reinforce, or replace as soon as possible.
E	Risk to public safety or system reliability.



8.0 DRAFT 10-YEAR PLAN RATES ANALYSIS

8.1 Rate Analysis Introduction

WAPA must establish rates sufficient to cover operating, maintenance, and purchase power expenses and repay capital investments in generation and transmission facilities within the allowable period.

Capital investments are repaid independent of funding source – both appropriations and alternative financing such as prepayments. Repayment begins the fiscal year following the in-service date of the capital investment.

Parker-Davis Project:
Parker-Davis Project (P-DP) uses a formula rate, meaning the rate is calculated each year with updated financial and sales inputs. The P-DP rate is forward-looking, which considers a 5-year forecast of annual expenses and repayment of capital investments, including replacements.

P-DP uses a "mortgage-type" amortization to calculate the annual principal and interest to be included in the rate. Repayment of capital investments includes existing unpaid investments as well as projections of future investments identified in the 10-Year Plan. P-DP replacements are required to be repaid within 40 years, based on a weighted-average service life, while additions are required to be repaid within 50 years.

Intertie Project:
The Intertie Project (Intertie) uses a stated rate, meaning once the rate is calculated, it is kept in place until no longer sufficient. The rate is reviewed annually to determine sufficiency. Similar to P-DP, the Intertie rate is also forward-looking but considers the projected annual expenses and capital investments for the next 50 years.

Intertie uses the "pinch-point" repayment methodology. The pinch-point year is when a significant required payment is due for a capital investment and therefore the annual revenue requirement is the highest. Repayment of capital investments includes existing unpaid investments as well as projections of future investments. According to the Federal Hydropower Replacements Book, replacements are required to be repaid by their service life and additions are required to be repaid within 50 years. The current pinch-point year for Intertie is FY 2020, when most of the original capital investment in the project requires repayment.

8.2 Analysis of Capital Investments

The projects in the draft 10-Year Plan are analyzed to determine their preliminary rate impact. Project costs, including 'Interest during Construction', and in-service dates are used in the analysis. Estimated principal and interest from the projects in the 10-Year Plan is divided by typical sales for the period to determine the rate impact. In the analysis, the annual rate impact for each project is displayed. For the P-DP rate, an average of the amounts in the 5-year rate window would determine the rate impact of the 10-Year Plan.

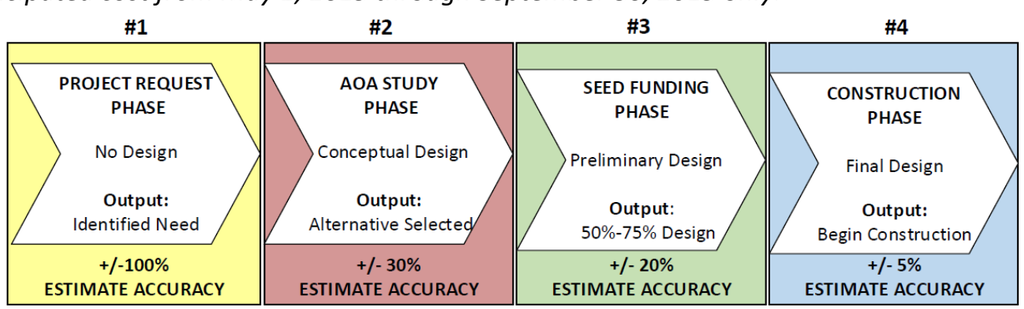
The Intertie rate analysis only reflects payments of interest before the FY 2020 pinch-point to maximize the amount of principal applied to the original capital investment in the project. After FY 2020, interest and principal will be collected for the investments in the 10-Year Plan.

8.3 Draft 10-Year Plan

Parker-Davis Project 10-Year Spend Plans (Costs in Thousands of Dollars)

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
PROJECT	TOTAL BUDGET	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
Tucson Substation Rebuild	9,836	80										
Gila-Knob 161-kV T-Line Reroute	3,707	8										
Black Point Mesa Reroute	2,262	28										
Parker-Davis Facility Rating Year 2	7,711	50										
Crossman Peak Microwave Facility	4,525	3,032	50									
Gila Substation 161-kV to 230-kV Rebuild	22,291	1,344	1,637									
Gila-Wellton Mohawk I-8 Crossing Rebuild	7,520	196	26									
Coolidge-Valley Farms 115-kV Rebuild	3,350	1,536	719	50								
Gila-Dome Tap 161-kV Rebuild	7,630	2,328	1,126	2								
Kofa-Dome Tap 161-kV Rebuild	5,511	350	4,000	851	50							
Bouse Upgrade Project	45,088	459	1,000	18,128	14,711	835	7,659	1,939				
Bouse-Kofa 161-kV Rebuild PHASE-1	13,260		407	7,172	5,132	456						
Bouse-Kofa 161-kV Rebuild PHASE-2	13,260		500		7,172	5,132	456					
Parker-Blythe #2 161-kV Rebuild Phase-1	18,542				237	17,336	805	164				
Parker-Blythe #2 161-kV Rebuild Phase-2	18,542				237		17,336	805	164			
Parker-Blythe #2 161-kV Rebuild Phase-3	18,542				237			17,336	805	164		
Parker Substation 161-kV Replacements	16,850							300	8,000	7,700	850	
Blythe-Headgate Rock #1 line 161-kV Rebuild	23,900							1,195	9,560	11,711	1,434	
Parker Substation 230-kV Replacements	12,100								600	2,000	9,900	500
Gila Substation 69-KV	10,500									800	6,050	3,200
Gila Knob 161-kV Remaining Rebuild	23,000										800	16,700
Gila Substation 34.5-kV / 14-KV	15,250											500
FISCAL YEAR (FY) TOTALS		**9,411**	**9,465**	**26,203**	**27,776**	**23,759**	**26,256**	**21,739**	**19,129**	**22,375**	**19,034**	**20,900**
TOTAL COST OF COMPLETED PROJECTS BY YEAR (RATE IMPACT)		**23,516**	**34,336**	**10,980**	**5,511**	**13,260**	**13,260**	**63,630**	**18,542**	**18,542**	**40,750**	**12,100**

Note: *Fiscal Year 2019 represents spend plans for anticipated cost from May 1, 2019 through September 30, 2019 only.*

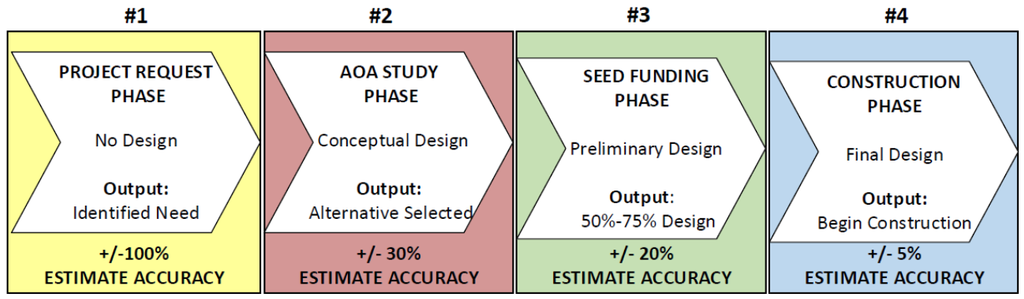


Intertie Project

10-Year Spend Plans (Costs in Thousands of Dollars)

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
PROJECT	**TOTAL BUDGET**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**FY28**	**FY29**
Liberty Series Capacitor Bank Replacement	10,372	2,622	76									
FISCAL YEAR (FY) TOTOLS		**2,622**	**76**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL COST OF COMPLETE PROJECTS BY YEAR (RATE IMPACT)		**0**	**10,372**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: *Fiscal Year 2019 represents spend plans for anticipated cost from May 1, 2019 through September 30, 2019 only.*



8.4 Draft 10-Year Plan Estimated Rate Impact

Parker-Davis Project 10-Year Plan Rate Impacts

NOTE: FY 2019 Rate without Future Capital
$18.00 / kW-Year

PROJECT	In Service Date	Interest Rate	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
Prior Year Projects (Pending Closeout)/Capitalized O&M	2019 +	various	$ 0.14	$ 0.35	$ 0.48	$ 0.58	$ 0.70	$ 0.80	$ 0.91	$ 1.02	$ 1.12	$ 1.18
Tucson Substation Rebuild	2019	3.000%	$ 0.17	$ 0.17	$ 0.17	$ 0.17	$ 0.17	$ 0.17	$ 0.17	$ 0.17	$ 0.17	$ 0.17
Gila-Knob 161-kV T-Line Reroute	2019	3.000%	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06
Black Point Mesa Reroute	2019	3.000%	$ 0.04	$ 0.04	$ 0.04	$ 0.04	$ 0.04	$ 0.04	$ 0.04	$ 0.04	$ 0.04	$ 0.04
Parker-Davis Facility Rating Year 2	2019	3.000%	$ 0.13	$ 0.13	$ 0.13	$ 0.13	$ 0.13	$ 0.13	$ 0.13	$ 0.13	$ 0.13	$ 0.13
Crossman Peak Microwave Facility	2020	3.000%		$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07
Gila Substation 161-kV to 230-kV Rebuild	2020	3.000%		$ 0.37	$ 0.37	$ 0.37	$ 0.37	$ 0.37	$ 0.37	$ 0.37	$ 0.37	$ 0.37
Gila-Wellton Mohawk I-8 Crossing Rebuild	2020	3.000%		$ 0.12	$ 0.12	$ 0.12	$ 0.12	$ 0.12	$ 0.12	$ 0.12	$ 0.12	$ 0.12
Coolidge-Valley Farms 115-kV Rebuild	2021	3.000%			$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06
Gila-Dome Tap 161-kV Rebuild	2021	3.000%			$ 0.13	$ 0.13	$ 0.13	$ 0.13	$ 0.13	$ 0.13	$ 0.13	$ 0.13
Kofa-Dome Tap 161-kV Rebuild	2022	3.000%				$ 0.09	$ 0.09	$ 0.09	$ 0.09	$ 0.09	$ 0.09	$ 0.09
Bouse Upgrade Project	2025	3.000%							$ 0.79	$ 0.79	$ 0.79	$ 0.79
Bouse-Kofa 161-kV Rebuild PHASE-1	2023	3.125%					$ 0.23	$ 0.23	$ 0.23	$ 0.23	$ 0.23	$ 0.23
Bouse-Kofa 161-kV Rebuild PHASE-2	2024	3.125%						$ 0.23	$ 0.23	$ 0.23	$ 0.23	$ 0.23
Parker-Blythe 161-kV #2 Rebuild PHASE-1	2025	3.375%							$ 0.33	$ 0.33	$ 0.33	$ 0.33
Parker-Blythe 161-kV #2 Rebuild PHASE-2	2026	3.375%								$ 0.34	$ 0.34	$ 0.34
Parker-Blythe 161-kV #2 Rebuild PHASE-3	2027	3.375%									$ 0.34	$ 0.34
Parker Substation 161-kV Replacements	2028	3.625%										$ 0.31
Blythe-Headgate Rock #1 line 161-kV Rebuild	2028	3.625%										$ 0.44
Parker Substation 230-kV Replacements	2029	3.625%										
Gila Substation 69KV	2030	3.625%										
Gila Knob Remaining Rebuild	2031	3.625%										
Gila Substation 34.5 / 14KV	2032	3.625%										
Total			**$ 0.53**	**$ 1.31**	**$ 1.62**	**$ 1.82**	**$ 2.16**	**$ 2.49**	**$ 3.72**	**$ 4.16**	**$ 4.60**	**$ 5.42**

P-DP 5-year Rate Window

Intertie Project

10-Year Plan Rate Impacts

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[l]
PROJECT	**In Service Date**	**Interest Rate**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**FY28**	**FY29**
Prior Year Projects (Pending Closeout)/Capitalized O&M	2019 +	3.000%	$ 0.02	$ 0.13	$ 0.25	$ 0.31	$ 0.37	$ 0.42	$ 0.48	$ 0.53	$ 0.59	$ 0.62
Liberty Series Capacitor Bank Replacement	2020	3.000%		$ 0.32	$ 0.32	$ 0.32	$ 0.32	$ 0.32	$ 0.32	$ 0.32	$ 0.32	$ 0.32
Total			**$ 0.02**	**$ 0.45**	**$ 0.57**	**$ 0.64**	**$ 0.69**	**$ 0.74**	**$ 0.80**	**$ 0.86**	**$ 0.91**	**$ 0.94**

9.0 CURRENT PREPAYMENT VOTE LOOK AHEAD

DECEMBER 2019 (Pivot Year)	
Project Name	**Project Start Date**
Parker-Blythe 161-kV Rebuild Phase I*	FY22
Parker-Blythe 161-kV Rebuild Phase II*	FY23
Parker-Blythe 161-kV Rebuild Phase III*	FY24

**Design for all three phases occurs in FY22 with construction staggered*

DECEMBER 2020	
Project Name	**Project Start Date**
Bouse Upgrade*	FY21

**FY19 Seed Funded Project*

DECEMBER 2021	
Project Name	**Project Start Date**
Currently No Proposed New Starts	N/A

DECEMBER 2022	
Project Name	**Project Start Date**
Parker Substation 161-kV Replacements	FY25
Blythe-Headgate Rock-161-kV Rebuild	FY25

DECEMBER 2023	
Project Name	**Project Start Date**
Parker Substation 230-kV Replacements	FY26

10.0 CAPITAL O&M (RRADs)

10.1 Common SCADA/EMS Vendor Project

FY 2019 contains a plan for the purchase of a common SCADA/EMS vendor platform to cover all regions in WAPA. Currently, the Agency has four separate regions with six SCADA/EMS installation locations. Of the six installations, there are three active systems at any one time providing visibility and control for grid operations. The others are in Standby mode.

The three system installations include two different COTS software products from GE, and one in-house developed SCADA/EMS product (UGP PCS) that is paired with a COTS advanced application system (Siemens ODMS). All three active systems provide full functionality to operators from a primary and alternate location at the same time providing for continuity of operations if a location becomes uninhabitable or is destroyed.
These systems evolved independently and utilize different hardware, software and maintenance arrangements. The support staff from each region have limited familiarity with the other systems in use, resulting in minimal synergy. System operators and transmission planners do not use common, WAPA-wide tools.

Selection Methodology

Our business case evaluated viable options for selection of a Common SCADA/EMS Solution. And as part of the project due diligence associated with generating the project's Request for Information (RFI), we formed a WAPA-wide team that formulated over 470 unique, detailed technical requirements covering 20 points of focus and 48 open-ended vendor questions covering the following eight areas:

- Vendor Information/Experience
- Cyber-Security
- System Architecture
- Product Development Planning
- Implementation Services
- SCADA/EMS Training
- Model Support
- Certification/Auditing/Standards

Current State and Financials

There is duplication of effort across regions maintaining and upgrading three different SCADA/EMS solutions with new technologies on a periodic basis. Each region has upgrade projects to complete this year. The UGP region employs internal development personnel to maintain/upgrade the PCS SCADA software in conjunction with SWPA. Currently SWPA and UGP PCS are on two different code paths and UGPs upgrade project involves merging code, QA testing, user and support staff education and eventual implementation in production. Each region also has duplication of departments, processes, personnel and support structures.

Lastly, this allows for the continued decrease in the total number of pieces of software supported across Western. FERC Order 693-A established reliability standards that require compliance with various standards. Many of these standards rely on the reliable operation of a SCADA/EMS. Examples of the standards where this project will provide efficiencies based on Western's tool usage: TOP 001, TOP 005, BAL 005.

Year	Budget	Description	Region
FY19	$ 3,250,000	Licensing	All
FY20-21	$ 2,840,000	Installation and Deployment	SNR
FY21-22	$ 2,840,000	Installation and Deployment	UGP
FY23-24	$ 2,840,000	Installation and Deployment	DSW/RMR

10.2 Parker-Davis Project

Western Area Power Administration

FY19 - FY28 DESERT SOUTHWEST RRADs MAINTENANCE CAPITAL PROGRAM

REF. NO.	PROJECT DESCRIPTION	LOCATION	ORG	FY19 BUDGET SUBMISSION	FY20 BUDGET SUBMISSION	FY21 BUDGET SUBMISSION	FY22 BUDGET PLAN	FY23 BUDGET PLAN	FY24 BUDGET PLAN	FY25 BUDGET PLAN	FY26 BUDGET PLAN	FY27 BUDGET PLAN	FY28 BUDGET PLAN
GGPD - PARKER DAVIS													
1	A2100 - Cyber Security	PHS	A20	$ -	$ -	$ 153,000	$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -
2	A2200 - Network	PHS	A20	$ 382,000	$ 77,000	$ 101,100	$ 266,000	$ 52,000	$ 97,375	$ 147,500	$ 857,350	$ 27,500	$ -
3	A2600 - Infrastructure	PHS	A20	$ 242,050	$ 19,050	$ -	$ -	$ 116,750	$ 193,134	$ 26,400	$ -	$ -	$ -
4	A2700 - SCADA (OSIsoft)	PHS	A20	$ 987,500	$ 247,500	$ 1,420,000	$ 45,000	$ 451,305	$ -	$ 107,500	$ -	$ -	$ -
5	A2900 - Power Mngt & Mrkt	PHS	A20	$ -	$ 825,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6	A2A00 - O&M Tech	PHS	A20	$ -	$ 500,000	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	A2XXX TOTALS			$ 1,611,550	$ 1,668,550	$ 1,774,100	$ 386,000	$ 620,055	$ 290,509	$ 281,400	$ 857,350	$ 27,500	$ -
7	Conference Room Camera AV Upgrades	PHS	G10	$ 581,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8	Bathroom Renovations FY18 Project	PHS	G10	$ 19,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	Chiller #2 Replacement	PHS	G10	$ -	$ 200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
10	Chiller Tower Replacement	PHS	G10	$ -	$ 150,000								
11	Security Entrance Upgrade	PHS	G10	$ -	$ 600,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	Generator Replacement	PHS	G10	$ -	$ 350,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
13	Fire Suppression System Upgrade	PHS	G10	$ -	$ 900,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14	Chiller #3 Replacement	PHS	G10	$ -	$ -	$ 200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	Chiller Tower Replacement	PHS	G10	$ -	$ -	$ 150,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
16	Cover Parking	PHS	G10	$ -	$ -	$ 600,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
17	Security Gate Upgrade	PHS	G10	$ -	$ -	$ 350,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
18	Executive Conference Room Upgrade	PHS	G10	$ -	$ -	$ 900,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
19	Facility Project TBD	PHS	G10	$ -	$ -	$ -	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000
	G1000 TOTALS			$ 600,000	$ 2,200,000	$ 2,200,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000
20	Replace PRS 230kV Breakers (286,382)	PRS	G50	$ -	$ -	$ -	$ 550,000	$ -	$ -	$ -	$ -	$ -	$ -
21	Replace RGS 230kV Breakers (1086, 682, 786)	RGS	G50	$ -	$ -	$ -	$ -	$ 555,000	$ -	$ -	$ -	$ -	$ -
22	Replace RGS 230kV Breakers (882, 982)	RGS	G50	$ -	$ -	$ -	$ -	$ -	$ 370,000	$ -	$ -	$ -	$ -
	G5000 TOTALS			$ -	$ -	$ -	$ 550,000	$ 555,000	$ 370,000	$ -	$ -	$ -	$ -

REF. NO.	PROJECT DESCRIPTION	LOCATION	ORG	FY19 BUDGET SUBMISSION	FY20 BUDGET SUBMISSION	FY21 BUDGET SUBMISSION	FY22 BUDGET PLAN	FY23 BUDGET PLAN	FY24 BUDGET PLAN	FY25 BUDGET PLAN	FY26 BUDGET PLAN	FY27 BUDGET PLAN	FY28 BUDGET PLAN
	ELECTRICIANS												
23	Test Equipment	MOVP	G52	$ 190,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000
24	HVAC Unit	GLA	G52	$ 61,000				$ -					
25	HVAC Unit	MCI	G52	$ 61,000				$ -					
26	HVAC Unit	TTT	G52	$ 61,000				$ -					
27	HVAC Unit	VAF	G52	$ 61,000				$ -					
28	Replace ED2 115kV Breakers (1162,1462)	ED2	G52	$ -	$ 390,000	$ 226,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
29	230kV Oil Breaker Replacement PAD 572 (TAM), purchase 2018, install 2019 (contingent upon construction PAD Rebuild project)	PAD	G52	$ -	$ 205,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
30	230kV Oil Breaker Replacement PAD 772 (TAM), purchase 2018, install 2019 (contingent upon construction PAD Rebuild project) - Omitted from Oct 2015 sheet	PAD	G52	$ -	$ 205,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
31	Replace PAD 230kV Breakers (582)	PAD	G52	$ -	$ -	$ 416,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
32	Replace PAD 230kV Breakers (1082)	PAD	G52	$ -	$ -	$ 416,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
33	Breaker 586 PAD	PAD	G52	$ -	$ -	$ -	$ 395,000	$ 5,000	$ -	$ -	$ -	$ -	$ -
34	Breaker 482 PAD	PAD	G52	$ -	$ -	$ -	$ 395,000	$ 5,000	$ -	$ -	$ -	$ -	$ -
35	Station Service COL-LIB	COL-LIB	G52	$ -	$ -	$ -	$ 650,000	$ 5,000	$ -	$ -	$ -	$ -	$ -
36	Breaker 1262 ED2	ED2	G52	$ -	$ -	$ -	$ 180,000	$ 5,000	$ -	$ -	$ -	$ -	$ -
	LINEMEN												
37	Wood Pole Program - BLYKNB	BLYKNB	G52	$ 2,611,411	$ 3,541,008	$ 3,000,000	$ 2,200,000	$ -	$ -	$ -	$ -	$ -	$ -
38	Wood Pole Program - ED5TUC	ED5TUC	G52	$ -	$ -	$ -	$ 1,800,000	$ -	$ -	$ -	$ -	$ -	$ -
39	D6 Caterpillar	PHS	G52	$ 375,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
40	Aerial Lift(Genie or JLG)	PHS	G52	$ 150,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
41	6X6 Water Truck	PHS	G52	$ 250,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
42	6X6 Self Loader	PHS	G52	$ 400,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
43	UTV	PHS	G52	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
44	Caterpillar D6	PHS	G52	$ -	$ 360,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
45	(3) Elliot Squirt Boom	PHS	G52	$ -	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
46	Self Loader 6X6	PHS	G52	$ -	$ 280,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
47	(3) F550 Lineman trucks	PHS	G52	$ -	$ 400,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
48	125' Barehand Bucket	PHS	G52	$ -	$ -	$ 2,300,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
49	100FT Bucket	PHS	G52	$ -	$ -	$ -	$ 600,000	$ -	$ -	$ -	$ -	$ -	$ -
50	Backhoe	PHS	G52	$ -	$ -	$ -	$ 80,000	$ -	$ -	$ -	$ -	$ -	$ -
51	Bobcat	PHS	G52	$ -	$ -	$ -	$ 80,000	$ -	$ -	$ -	$ -	$ -	$ -
52	Line Truck	PHS	G52	$ -	$ -	$ -	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ -
53	Line truck	PHS	G52	$ -	$ -	$ -	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ -
54	Wire Puller	PHS	G52	$ -	$ -	$ -	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ -
55	Wire Tensioner	PHS	G52	$ -	$ -	$ -	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ -
56	Wire Pulling Dollies	PHS	G52	$ -	$ -	$ -	$ 200,000	$ -	$ -	$ -	$ -	$ -	$ -
57	Wood Pole Program	TBD	G52	$ -	$ -	$ -	$ -	$ 3,000,000	$ 3,000,000	$ 3,000,000	$ 3,000,000	$ 3,000,000	$ 3,000,000
58	Heavy Equipment - TBD	TBD	G52	$ -	$ -	$ -	$ -	$ 950,000	$ 900,000	$ 900,000	$ 900,000	$ 900,000	$ 900,000
	G5200 TOTALS			$ 4,250,411	$ 6,001,008	$ 6,478,000	$ 8,700,000	$ 4,090,000	$ 4,020,000	$ 4,020,000	$ 4,020,000	$ 4,020,000	$ 4,020,000

REF. NO.	PROJECT DESCRIPTION	LOCATION	ORG	FY19 BUDGET SUBMISSION	FY20 BUDGET SUBMISSION	FY21 BUDGET SUBMISSION	FY22 BUDGET PLAN	FY23 BUDGET PLAN	FY24 BUDGET PLAN	FY25 BUDGET PLAN	FY26 BUDGET PLAN	FY27 BUDGET PLAN	FY28 BUDGET PLAN
	G53 - Communication Projects												
59	Cisco SONET Replacement	GPK	G53	$ 5,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
60	Power System Replacement (Microwave Bldg)	PHS	G53	$ 140,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
61	Comm Site Building Replacement	PSP	G53	$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
62	RTU Replacements	PAD	G53	$ 82,370	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
63	Power System Replacement (Comm Center Batteries)	PHS	G53	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
64	UHF Radios	MULTI-SITES	G53	$ 365,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
65	WIN/CIP Program	MULTI-SITES	G53	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000
66	RTU Replacements Program	HEN	G53	$ -	$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
67	RTU Replacements Program	SPT	G53	$ -	$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
68	Radio Replacements (JUS) Program	TEL	G53	$ -	$ 60,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
69	Radio Replacements (JUS) Program	YPO	G53	$ -	$ 60,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
70	Comm Site Building Replacement Program	PSP	G53	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
71	Power System Replacement Program	HCR	G53	$ -	$ 35,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
72	Radio Replacements (JUS) Program	JUS	G53	$ -	$ -	$ 120,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
73	Comm Site Building Replacement Program	PSP	G53	$ -	$ -	$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
74	Power System Replacement Program	KOF	G53	$ -	$ -	$ 35,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
75	RTU Replacements Program	PAD	G53	$ -	$ -	$ 150,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
76	Radio Replacements (JUS) Program	TBD	G53	$ -	$ -	$ -	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000
77	Comm Site Building Replacement Program	TBD	G53	$ -	$ -	$ -	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000
78	Power System Replacement Program	TBD	G53	$ -	$ -	$ -	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000
79	RTU Replacements Program	TBD	G53	$ -	$ -	$ -	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000
80	OPGW - Installation (In AOA Study Phase)	LAD-IMPERIAL	G53	$ -	$ -	$ -	$ -	$ 880,000	$ 880,000	$ 880,000	$ 880,000	$ 880,000	$ 880,000
	Communication Totals			$ 777,370	$ 505,000	$ 480,000	$ 525,000	$ 1,405,000	$ 1,405,000	$ 1,405,000	$ 1,405,000	$ 1,405,000	$ 1,405,000
	G53 - Protection Projects												
81	Test Equipment	MOVP	G53	$ 159,630	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000
82	Meter Program	GLT	G53	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
83	Relay Replacements - Line	HEN/MED	G53	$ 160,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
84	Relay Replacements - Line	PHX/LIB	G53	$ 160,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
85	PRC-002-2 DME Upgrades & Team Additions	TTT	G53	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
86	PRC-002-2 DME Upgrades & Team Additions	LIB	G53	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
87	Wellton Mohawk Pumping Plant Upgrades	WM1/WM3	G53	$ 5,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
88	Relay Replacements Program	GLA	G53	$ -	$ 200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
89	Meter Replacement Program	GLA	G53	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
90	PRC-002-2 DME Upgrades & Team Additions Program	TTT	G53	$ -	$ 100,250	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

REF. NO.	PROJECT DESCRIPTION	LOCATION	ORG	FY19 BUDGET SUBMISSION	FY20 BUDGET SUBMISSION	FY21 BUDGET SUBMISSION	FY22 BUDGET PLAN	FY23 BUDGET PLAN	FY24 BUDGET PLAN	FY25 BUDGET PLAN	FY26 BUDGET PLAN	FY27 BUDGET PLAN	FY28 BUDGET PLAN
91	Relay Replacements – 12.4kV BUS/TRANSFER BREAKER/ED2#1&2 Protection Installation	COL	G53	$ -	$ -	$ 300,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
92	Relay Replacements – Line Relaying	SGR	G53	$ -	$ -	$ 332,187	$ -	$ -	$ -	$ -	$ -	$ -	$ -
93	Relay Replacements – Line Relaying	WMS/BLY	G53	$ -	$ -	$ 125,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
94	Meter Replacement Program	PHX	G53	$ -	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
95	PRC-002-2 DME Upgrades & Team Additions Program	TTT	G53	$ -	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
96	PRC-002-2 DME Upgrades & Team Additions Program	TBD	G53	$ -	$ -	$ -	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000
97	Meter Replacement Program	TBD	G53	$ -	$ -	$ -	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000
98	Relay Replacements Program	TBD	G53	$ -	$ -	$ -	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000
	Protection Totals			$ 784,630	$ 500,250	$ 1,057,187	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000
	G5300 TOTALS			$ 1,562,000	$ 1,005,250	$ 1,537,187	$ 1,025,000	$ 1,905,000	$ 1,905,000	$ 1,905,000	$ 1,905,000	$ 1,905,000	$ 1,905,000
99	Physical Security Upgrade	TTT/DAD/PHS/ PCK	G56	$ 629,600	$ 520,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
100	UPS Project	PHX	G56	$ 20,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	G5600 TOTALS			$ 649,600	$ 520,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101	Federal Hydropower Mgt Tool	PHX	G61	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	G6100 TOTALS			$ 500,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	PARKER DAVIS TOTALS			$ 9,173,561	$ 11,394,808	$ 11,989,287	$ 11,161,000	$ 7,670,055	$ 7,085,509	$ 6,706,400	$ 7,282,350	$ 6,452,500	$ 6,425,000

10.3 Intertie Project

REF. NO.	PROJECT DESCRIPTION	LOCATION	ORG	FY19 BUDGET SUBMISSION	FY20 BUDGET SUBMISSION	FY21 BUDGET SUBMISSION	FY22 BUDGET PLAN	FY23 BUDGET PLAN	FY24 BUDGET PLAN	FY25 BUDGET PLAN	FY26 BUDGET PLAN	FY27 BUDGET PLAN	FY28 BUDGET PLAN
GGIN - INTERTIE													
1	Test Equipment	MOVP	G52	$ 40,000	$ 60,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000
2	Station Service Battery Replacement	PCK	G52	$ 67,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	G5200 TOTALS			$ 107,000	$ 60,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000
	G53 - Communication Projects												
3	WIN/CIP 7 Security Relay Encryption	MED	G53	$ 15,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
4	DACs Replacement	WTK	G53	$ -	$ -	$ 315,000							
5	Power System Replacement	LIB	G53	$ 35,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Communication Totals			$ 50,000	$ -	$ 315,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	G53 - Protection Projects												
6	Relay Replacements - Basler and Transformer [KU2A]	PCK	G53	$ 60,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
7	PRC-002-2 DME Upgrades & Team Additions	MED	G53	$ 230,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8	PRC-002-2 DME Upgrades & Team Additions	LIB	G53	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	Test Equipment	MOVP	G53	$ -	$ 140,000	$ -	$ 140,000	$ 140,000	$ 140,000	$ 140,000	$ 140,000	$ 140,000	$ 140,000
10	PRC-002-2 DME Upgrades & Team Additions	MED	G53	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11	Meter Replacement - Revenue & Panel	MED	G53	$ -	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	Relay Replacements - Line/Transformer	MED	G53	$ -	$ 200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
13	PRC-002-2 DME Upgrades & Team Additions	MED	G53	$ -	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14	Meter Replacement - Revenue & Panel Program	PPK	G53	$ -	$ -	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	Relay Replacements - Line/Transformer Program	LIB	G53	$ -	$ -	$ 200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
16	PRC-002-2 DME Upgrades & Team Additions Program	TBD	G53	$ -	$ -	$ -	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000
17	Meter Replacement - Revenue & Panel Program	TBD	G53	$ -	$ -	$ -	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000
18	Relay Replacements - Line/Transformer Program	TBD	G53	$ -	$ -	$ -	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000
	Protection Totals			$ 390,000	$ 490,000	$ 350,000	$ 490,000	$ 490,000	$ 490,000	$ 490,000	$ 490,000	$ 490,000	$ 490,000
	G5300 TOTALS			$ 440,000	$ 490,000	$ 665,000	$ 490,000	$ 490,000	$ 490,000	$ 490,000	$ 490,000	$ 490,000	$ 490,000
19	Physical Security Upgrade	PCK	G56	$ 265,988	$ 520,000	$ 125,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	230kv Breaker & Pad Replacements for LIB 182 & 1386 (TAM)	LIB	G56	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	G5600 TOTALS			$ 265,988	$ 620,000	$ 125,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
21	Mead Phoenix 500kV Line	MED/PHX	G61	$ 800,000	$ 1,500,000	$ 3,000,000	$ 1,500,000	$ 1,500,000	$ 1,500,000	$ 1,500,000	$ 1,500,000	$ 1,500,000	$ 1,500,000
	G6100 TOTALS			$ 800,000	$ 1,500,000	$ 3,000,000	$ 1,500,000	$ 1,500,000	$ 1,500,000	$ 1,500,000	$ 1,500,000	$ 1,500,000	$ 1,500,000
	INTERTIE TOTALS			$ 1,612,988	$ 2,670,000	$ 3,830,000	$ 2,030,000	$ 2,030,000	$ 2,030,000	$ 2,030,000	$ 2,030,000	$ 2,030,000	$ 2,030,000

10.4 FY 2021 DSW Budget vs. Actuals –Reported in the "Fiscal Year Work Plan Meeting" hosted by WAPA DSW on April 3, 2019

Intertie

April 3, 2019

Work Plan FY21 ($$$)

Budget Activity	Description	FY16 Actuals	FY17 Actuals	FY18 Actuals	Work Plan FY19	Work Plan FY20	Work Plan FY21	Work Plan FY22	Work Plan FY23	Work Plan FY24	Work Plan FY25
Maintenance											
N/FGIN ADMSM	Admin Maintenance Support	$ -	$ -	$ 5,531	$ 134,690	$ 509,342	$ 99,422	$ 529,919	$ 540,518	$ 551,328	$ 551,328
N/FGIN COMMM	Communication & Control	$ 139,232	$ 194,603	$ 197,249	$ 287,959	$ 298,429	$ 454,457	$ 310,486	$ 316,695	$ 323,029	$ 323,029
N/FGIN ENVTM	Environmental	$ -	$ -	$ 344,359	$ 148,542	$ 159,618	$ 176,171	$ 166,067	$ 169,388	$ 172,776	$ 172,776
N/FGIN LINCM	Lines, Direct Hrs, No Specific Job	$ 53,953	$ 139,039	$ 118,532	$ 158,813	$ 140,698	$ 224,099	$ 143,382	$ 149,310	$ 152,296	$ 152,296
N/FGIN LINSM	O&M of Trans Lines	$ 279,910	$ 179,104	$ 1,055,348	$ 188,483	$ 237,102	$ 391,125	$ 246,681	$ 251,614	$ 256,647	$ 256,647
N/FGIN STUDM	Transmission/Engineering Studies	$ 184,810	$ 304,799	$ 236,382	$ 444,595	$ 516,247	$ 443,778	$ 532,715	$ 541,197	$ 549,848	$ 549,848
N/FGIN SUBCM	Subs, Direct Hrs, No Specific Job	$ 1,472,170	$ 1,086,528	$ 1,442,985	$ 1,369,475	$ 1,537,553	$ 1,764,565	$ 1,599,670	$ 1,631,664	$ 1,664,297	$ 1,664,297
N/FGIN SUBSM	O&M of Subs & Related Facilities	$ 2,362,181	$ 2,494,873	$ 2,681,109	$ 3,185,019	$ 2,389,160	$ 2,659,566	$ 2,485,682	$ 2,535,396	$ 2,586,104	$ 2,586,104
	Subtotal Maintenance	$ 4,492,256	$ 4,398,946	$ 6,081,495	$ 5,917,576	$ 5,788,149	$ 6,213,183	$ 6,014,602	$ 6,135,782	$ 6,256,325	$ 6,256,325
							2%				
Non-Maintenance											
N/FGIN BILLM	Power Billing	$ 119,018	$ 73,701	$ 58,511	$ 141,020	$ 167,896	$ 161,311	$ 174,679	$ 178,172	$ 181,736	$ 181,736
N/FGIN FINAM	Financial Management	$ 83,859	$ 62,790	$ 68,575	$ 99,810	$ 138,999	$ 71,716	$ 144,615	$ 147,507	$ 150,457	$ 150,457
N/FGIN GWAMM	General Western Allocation	$ 567,904	$ 602,459	$ 646,333	$ (13,254)	$ -	$ -	$ -	$ -	$ -	$ -
N/FGIN MRKTM	Power Marketing	$ 588,050	$ 670,494	$ 851,197	$ 1,236,185	$ 1,137,736	$ 1,443,933	$ 1,183,701	$ 1,207,375	$ 1,231,523	$ 1,231,523
N/FGIN SAFEM	Safety & Security	$ 103,299	$ 98,983	$ 87,903	$ 150,339	$ 152,231	$ 529,439	$ 540,028	$ 550,828	$ 561,845	$ 573,082
N/FGIN SOLDM	Sys Ops & Load Dispatch	$ 625,446	$ 631,750	$ 640,800	$ 836,448	$ 778,671	$ 889,440	$ 802,939	$ 815,438	$ 828,188	$ 828,188
N/FGIN SOLWM	Mead-Phoenix O&M	$ 2,065,060	$ 1,913,664	$ 3,267,265	$ 1,500,000	$ 1,502,513	$ 1,501,716	$ 1,563,215	$ 1,594,479	$ 1,626,368	$ 1,626,368
N/FGIN SUPTM	Data Activities Charges	$ 903,959	$ 1,057,303	$ 1,105,779	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/FGIN SVCFM	DSWR Service Facility Clearing	$ 254,230	$ 285,227	$ 232,435	$ 283,491	$ 307,034	$ 307,091	$ 319,438	$ 325,827	$ 332,344	$ 332,344
	Subtotal Non-Maintenance	$ 5,310,825	$ 5,396,371	$ 6,958,798	$ 4,234,039	$ 4,185,080	$ 4,904,647	$ 4,728,615	$ 4,819,626	$ 4,912,461	$ 4,923,698
	Total O&M	**$ 9,803,080**	**$ 9,795,317**	**$ 13,040,293**	**$ 10,151,615**	**$ 9,973,229**	**$ 11,117,829**	**$ 10,743,217**	**$ 10,955,408**	**$ 11,168,786**	**$ 11,180,023**
Replacements											
N/FGIN COMMB	Replace Comm & Control Equip	$ 29,012	$ -	$ 744,937	$ -	$ -	$ 315,841	$ -	$ -	$ -	$ -
N/FGIN LINSB	Transmission Lines	$ 650,000	$ 50,000	$ -	$ 1,500,000	$ 1,500,000	$ 4,335,554	$ 1,500,000	$ 1,500,000	$ 1,500,000	$ 1,500,000
N/FGIN MOVPB	Movable Property	$ -	$ 214,433	$ -	$ 40,000	$ 200,000	$ 40,000	$ 180,000	$ 180,000	$ 180,000	$ 180,000
N/FGIN SUBSB	Replace Substation Equip	$ 1,325,393	$ 1,289,127	$ 17,401	$ 900,000	$ 1,015,000	$ 830,144	$ 350,000	$ 350,000	$ 350,000	$ 350,000
	Total RRADs	**$ 2,004,405**	**$ 1,553,560**	**$ 762,338**	**$ 2,440,000**	**$ 2,715,000**	**$ 5,521,539**	**$ 2,030,000**	**$ 2,030,000**	**$ 2,030,000**	**$ 2,030,000**
Construction											
Appropriated	Multiple	$ 2,335,581	$ 3,895,732	$ 1,675,772	$ -	$ -	$ -	$ -	$ -	$ 4,200,000	$ 4,200,000
Prepayment	Multiple	$ 194,251	$ 409,964	$ 1,366,993	$ 3,195,000	$ -	$ -	$ -	$ -	$ -	$ -
	Total Construction	**$ 2,529,831**	**$ 4,305,696**	**$ 3,042,765**	**$ 3,195,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 4,200,000**	**$ 4,200,000**
Purchase Power & Wheeling											
N/FGIN PPW W	Purchase Power & Wheeling	$ 2,546,266	$ 1,761,364	$ 3,789,611	$ 4,000,000	$ 4,000,000	$ 4,000,000	$ 4,000,000	$ 4,000,000	$ 4,000,000	$ 4,000,000
	Total PPW	**$ 2,546,266**	**$ 1,761,364**	**$ 3,789,611**	**$ 4,000,000**	**$ 4,000,000**	**$ 4,000,000**	**$ 4,000,000**	**$ 4,000,000**	**$ 4,000,000**	**$ 4,000,000**
GRAND TOTAL - $$$		**$ 16,883,581**	**$ 17,415,937**	**$ 20,635,007**	**$ 19,786,615**	**$ 16,688,229**	**$ 20,639,368**	**$ 16,773,217**	**$ 16,985,408**	**$ 21,398,786**	**$ 21,410,023**

Intertie
April 3, 2019

Work Plan FY21 (FTE)

Budget Activity	Description	FY16 Actuals	FY17 Actuals	Work Plan FY18	Work Plan FY19	Work Plan FY20	Work Plan FY21	Work Plan FY22	Work Plan FY23	Work Plan FY24	Work Plan FY24
Maintenance											
N/FGIN ADMSM	Admin Maintenance Support	0.00	1.59	0.03	0.44	1.54	0.17	0.17	0.17	0.17	0.17
N/FGIN COMMM	Communication & Control	0.63	0.88	0.80	0.79	0.79	1.40	1.40	1.40	1.40	1.40
N/FGIN ENVTM	Environmental	0.00	0.69	0.38	0.59	0.59	0.35	0.35	0.35	0.35	0.35
N/FGIN LINCM	Lines, Direct Hrs, No Specific Job	0.30	0.42	0.49	0.44	0.29	0.59	0.59	0.59	0.59	0.59
N/FGIN LINSM	O&M of Trans Lines	0.15	0.49	0.88	0.45	0.58	1.29	1.29	1.29	1.29	1.29
N/FGIN STUDM	Transmission/Engineering Studies	1.01	0.98	1.03	1.47	1.34	1.29	1.29	1.29	1.29	1.29
N/FGIN SUBCM	Subs, Direct Hrs, No Specific Job	5.71	4.19	4.31	3.47	4.17	4.62	4.62	4.62	4.62	4.62
N/FGIN SUBSM	O&M of Subs & Related Facilities	5.42	3.92	7.79	5.78	3.88	7.25	7.25	7.25	7.25	7.25
	Subtotal Maintenance	13.21	13.16	15.71	13.44	13.19	16.95	16.95	16.95	16.95	16.95
Non-Maintenance											
N/FGIN BILLM	Power Billing	0.77	0.50	0.32	0.62	0.72	0.57	0.57	0.57	0.57	0.57
N/FGIN FINAM	Financial Management	0.30	0.16	0.24	0.25	0.42	0.12	0.12	0.12	0.12	0.12
N/FGIN GWAMM	General Western Allocation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N/FGIN MRKTM	Power Marketing	2.99	3.29	4.00	4.11	4.03	5.22	5.22	5.22	5.22	5.22
N/FGIN SAFEM	Safety & Security	0.58	0.64	0.50	0.65	0.65	0.29	0.29	0.29	0.29	0.29
N/FGIN SOLDM	Sys Ops & Load Dispatch	2.95	2.84	2.82	2.81	2.77	2.67	2.67	2.67	2.67	2.67
N/FGIN SOLWM	Mead-Phoenix O&M	0.00	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01
N/FGIN SUPTM	Data Activities Charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N/FGIN SVCFM	DSWR Service Facility Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Subtotal Non-Maintenance	7.59	7.43	7.89	8.45	8.59	8.88	8.88	8.88	8.88	8.88
	Total O&M	**20.80**	**20.59**	**23.60**	**21.89**	**21.79**	**25.83**	**25.83**	**25.83**	**25.83**	**25.83**
Replacements											
N/FGIN COMMB	Replace Comm & Control Equip	0.04	0.00	0.03	0.00	0.00	0.06	0.06	0.06	0.06	0.06
N/FGIN LINSB	Transmission Lines	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N/FGIN MOVPB	Movable Property	0.00	0.00	0.00	0.00	0.00	2.07	2.07	2.07	2.07	2.07
N/FGIN SUBSB	Replace Substation Equip	0.92	1.50	1.41	1.06	1.56	2.29	2.29	2.29	2.29	2.29
	Total RRADs	**0.96**	**1.50**	**1.44**	**1.06**	**1.56**	**4.43**	**4.43**	**4.43**	**4.43**	**4.43**
Construction											
Appropriated	Multiple	8.62	0.19	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prepayment	Multiple	0.30	1.10	1.92	1.20	0.00	0.00	0.00	0.00	0.00	0.00
	Total Construction	**8.92**	**1.29**	**2.05**	**1.20**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Purchase Power & Wheeling											
N/FGIN PPW W	Replace Substation Equip	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total PPW	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
GRAND TOTAL - FTE		**30.68**	**23.38**	**27.09**	**24.15**	**23.35**	**30.25**	**30.25**	**30.25**	**30.25**	**30.25**

Parker-Davis
April 3, 2019

Work Plan FY21 ($$$)

Budget Activity	Description	FY16 Actuals	FY17 Actuals	FY18 Actuals	Work Plan FY19	Work Plan FY20	Work Plan FY21	Work Plan FY22	Work Plan FY23	Work Plan FY24	Work Plan FY25
Maintenance											
N/FGPD ADMSM	Admin Maintenance Support	$ -	$ -	$ 22,698	$ 576,553	$ 1,924,861	$ 436,606	$ 445,338	$ 454,244	$ 463,329	$ 472,596
N/FGPD COMMM	Communication & Control	$ 862,000	$ 1,118,182	$ 1,228,846	$ 1,244,975	$ 1,392,399	$ 1,820,141	$ 1,856,543	$ 1,893,674	$ 1,931,548	$ 1,970,179
N/FGPD ENVTM	Environmental	$ -	$ -	$ 883,998	$ 545,309	$ 390,376	$ 1,637,402	$ 1,670,150	$ 1,703,553	$ 1,737,624	$ 1,772,376
N/FGPD LINCM	Lines, Direct Hrs, No Specific Job	$ 1,463,788	$ 1,569,909	$ 1,487,143	$ 1,627,460	$ 1,335,273	$ 1,748,990	$ 1,783,970	$ 1,819,650	$ 1,856,043	$ 1,893,163
N/FGPD LINSM	O&M of Trans Lines	$ 3,384,864	$ 6,515,139	$ 2,548,088	$ 6,562,788	$ 6,745,210	$ 4,879,478	$ 4,977,067	$ 5,076,608	$ 5,178,141	$ 5,281,703
N/FGPD METEM	Metering Station Maintenance	$ (500)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/FGPD STUDM	Transmission/Engineering Studies	$ 1,545,804	$ 1,481,791	$ 1,901,160	$ 2,254,069	$ 2,106,497	$ 2,729,289	$ 2,783,875	$ 2,839,552	$ 2,896,343	$ 2,954,270
N/FGPD SUBCM	Subs, Direct Hrs, No Specific Job	$ 3,720,064	$ 3,927,361	$ 3,935,299	$ 3,258,397	$ 3,892,087	$ 4,241,588	$ 4,326,420	$ 4,412,948	$ 4,501,207	$ 4,591,231
N/FGPD SUBSM	O&M of Subs & Related Facilities	$ 5,697,602	$ 5,658,103	$ 5,647,135	$ 6,314,090	$ 5,008,087	$ 6,281,570	$ 6,407,202	$ 6,535,346	$ 6,666,053	$ 6,799,374
	Subtotal Maintenance	$ 16,673,621	$ 20,270,485	$ 17,654,367	$ 22,383,642	$ 22,794,790	$ 23,775,063	$ 24,250,564	$ 24,735,575	$ 25,230,287	$ 25,734,893
Non-Maintenance											
N/FGPD BILLM	Power Billing	$ 477,508	$ 424,217	$ 482,454	$ 677,037	$ 1,438,863	$ 847,900	$ 864,858	$ 882,155	$ 899,799	$ 917,795
N/FGPD CAREM	Conserv & Renew Energy	$ 43,064	$ 41,900	$ 59,421	$ 82,730	$ 117,217	$ 51,294	$ 52,319	$ 53,366	$ 54,433	$ 55,522
N/FGPD FINAM	Financial Management	$ 344,314	$ 281,411	$ 212,517	$ 381,402	$ 278,379	$ 223,475	$ 227,945	$ 232,504	$ 237,154	$ 241,897
N/FGPD GWAMM	General Western Allocation	$ 2,467,753	$ 2,531,640	$ 2,691,400	$ (63,206)	$ -	$ -	$ -	$ -	$ -	$ -
N/FGPD MRKTM	Power Marketing	$ 2,253,837	$ 2,541,307	$ 2,695,611	$ 4,373,529	$ 3,734,931	$ 3,086,773	$ 3,148,509	$ 3,211,479	$ 3,275,709	$ 3,341,223
N/FGPD SAFEM	Safety & Security	$ 542,067	$ 500,463	$ 449,517	$ 643,129	$ 899,601	$ 601,024	$ 613,044	$ 625,305	$ 637,811	$ 650,567
N/FGPD SOLDM	Sys Ops & Load Dispatch	$ 5,633,937	$ 5,704,033	$ 5,858,389	$ 7,053,804	$ 7,801,474	$ 7,396,093	$ 7,544,015	$ 7,694,895	$ 7,848,793	$ 8,005,769
N/FGPD SUPTM	Data Activities Charges	$ 3,970,449	$ 4,456,732	$ 4,537,544	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/FGPD SVCFM	DSWR Service Facility Clearing	$ 1,178,760	$ 1,217,692	$ 1,010,513	$ 1,210,279	$ 1,310,792	$ 1,335,082	$ 1,361,783	$ 1,389,019	$ 1,416,799	$ 1,445,135
	Subtotal Non-Maintenance	$ 16,911,689	$ 17,699,395	$ 17,997,366	$ 14,358,703	$ 15,581,257	$ 13,541,641	$ 13,812,474	$ 14,088,723	$ 14,370,498	$ 14,657,908
	Total O&M	**$ 33,585,310**	**$ 37,969,880**	**$ 35,651,733**	**$ 36,742,345**	**$ 38,376,047**	**$ 37,316,704**	**$ 38,063,038**	**$ 38,824,299**	**$ 39,600,785**	**$ 40,392,801**
Replacements											
N/FGPD COMMB	Replace Comm & Control Equip	$ 443,709	$ 185,274	$ 1,279,472	$ 630,000	$ 505,000	$ 363,334	$ 1,905,000	$ 1,785,000	$ 1,785,000	$ 1,785,000
N/FGPD LINSB	Transmission Lines	$ 1,770,619	$ 2,947,488	$ 4,236,158	$ 3,000,000	$ 2,520,000	$ 3,127,904	$ 3,000,000	$ 3,000,000	$ 3,000,000	$ 3,000,000
N/FGPD MOVPB	Movable Property	$ 1,571,950	$ 4,347,385	$ 523,547	$ 3,051,550	$ 3,435,000	$ 5,053,204	$ 1,606,000	$ 1,790,000	$ 1,310,000	$ 1,402,000
N/FGPD SUBSB	Replace Substation Equip	$ 1,888,844	$ 3,002,128	$ 4,002,557	$ 4,087,000	$ 3,696,000	$ 4,363,536	$ 1,242,000	$ 2,047,000	$ 1,163,000	$ 1,516,000
	Total RRADs	**$ 5,675,122**	**$ 10,482,275**	**$ 10,041,734**	**$ 10,768,550**	**$ 10,156,000**	**$ 12,907,978**	**$ 7,753,000**	**$ 8,622,000**	**$ 7,258,000**	**$ 7,703,000**
Construction											
Appropriated	Multiple	$ 2,500,913	$ 3,019,514	$ 1,087,409	$ 5,770,000	$ 20,174,000	$ 19,706,626	$ 8,718,000	$ 25,870,000	$ 22,854,000	$ 22,152,000
Prepayment	Multiple	$ 10,382,085	$ 4,714,932	$ 18,978,071	$ 8,838,000	$ 9,322,000	$ 8,067,426	$ 5,182,000	$ 456,000	$ -	$ -
	Total Construction	**$ 12,882,998**	**$ 7,734,446**	**$ 20,065,480**	**$ 14,608,000**	**$ 29,496,000**	**$ 27,774,052**	**$ 13,900,000**	**$ 26,326,000**	**$ 22,854,000**	**$ 22,152,000**
Purchase Power & Wheeling											
N/FGPD PPW W	Purchase Power & Wheeling	$ 5,154,651	$ 9,237,999	$ 14,169,523	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000
	Total PPW	**$ 5,154,651**	**$ 9,237,999**	**$ 14,169,523**	**$ 10,000,000**	**$ 10,000,000**	**$ 10,000,000**	**$ 10,000,000**	**$ 10,000,000**	**$ 10,000,000**	**$ 10,000,000**
GRAND TOTAL - $$$		**$ 57,298,081**	**$ 65,424,600**	**$ 79,928,470**	**$ 72,118,895**	**$ 88,028,047**	**$ 87,998,734**	**$ 69,716,038**	**$ 83,772,299**	**$ 79,712,785**	**$ 80,247,801**

Parker-Davis
April 3, 2019

Work Plan FY21 (FTE)

Budget Activity	Description	FY16 Actuals	Work Plan FY17	Work Plan FY18	Work Plan FY19	Work Plan FY20	Work Plan FY21	Work Plan FY22	Work Plan FY23	Work Plan FY24	Work Plan FY24
Maintenance											
N/FGPD ADMSM	Admin Maintenance Support	0.00	5.67	0.11	1.81	5.48	0.94	0.94	0.94	0.94	0.94
N/FGPD COMMM	Communication & Control	3.17	3.86	4.20	3.35	3.32	4.85	4.85	4.85	4.85	4.85
N/FGPD ENVTM	Environmental	0.00	2.80	2.95	2.01	1.17	5.15	5.15	5.15	5.15	5.15
N/FGPD LINCM	Lines, Direct Hrs, No Specific Job	4.88	3.46	5.02	4.36	2.87	4.23	4.23	4.23	4.23	4.23
N/FGPD LINSM	O&M of Trans Lines	7.43	9.55	6.18	5.77	7.30	5.52	5.52	5.52	5.52	5.52
N/FGPD METEM	Metering Station Maintenance	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N/FGPD STUDM	Transmission/EnGPDeering Studies	5.84	4.70	4.97	7.17	6.37	6.63	6.63	6.63	6.63	6.63
N/FGPD SUBCM	Subs, Direct Hrs, No Specific Job	9.53	10.76	12.60	8.94	10.22	10.67	10.67	10.67	10.67	10.67
N/FGPD SUBSM	O&M of Subs & Related Facilities	18.20	10.19	19.50	14.69	11.22	16.23	16.23	16.23	16.23	16.23
	Subtotal Maintenance	49.05	51.00	55.53	48.12	47.95	54.22	54.22	54.22	54.22	54.22
Non-Maintenance											
N/FGPD BILLM	Power Billing	2.47	2.21	2.40	2.79	3.80	2.49	2.49	2.49	2.49	2.49
N/FGPD CAREM	Conserv & Renew Energy	0.18	0.17	0.10	0.31	0.39	0.15	0.15	0.15	0.15	0.15
N/FGPD FINAM	Financial Management	1.06	0.46	0.55	0.96	0.44	0.21	0.21	0.21	0.21	0.21
N/FGPD GWAMM	General Western Allocation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N/FGPD MRKTM	Power Marketing	9.91	10.04	11.23	14.07	12.89	10.50	10.50	10.50	10.50	10.50
N/FGPD SAFEM	Safety & Security	2.71	2.75	2.53	2.77	2.71	2.04	2.04	2.04	2.04	2.04
N/FGPD SOLDM	Sys Ops & Load Dispatch	24.56	23.75	24.20	23.06	23.07	23.14	23.14	23.14	23.14	23.14
N/FGPD SUPTM	Data Activities Charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N/FGPD SVCFM	DSWR Service Facility Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Subtotal Non-Maintenance	40.88	39.38	41.01	43.96	43.30	38.53	38.53	38.53	38.53	38.53
	Total O&M	**89.93**	**90.38**	**96.54**	**92.07**	**91.25**	**92.74**	**92.74**	**92.74**	**92.74**	**92.74**
Replacements											
N/FGPD COMMB	Replace Comm & Control Equip	0.64	0.59	0.49	0.94	0.74	0.49	0.49	0.49	0.49	0.49
N/FGPD LINSB	Transmission Lines	5.17	6.10	10.35	7.28	1.19	1.51	1.51	1.51	1.51	1.51
N/FGPD MOVPB	Movable Property	0.00	0.00	0.00	0.00	1.14	0.98	0.98	0.98	0.98	0.98
N/FGPD SUBSB	Replace Substation Equip	2.61	1.80	0.08	3.27	1.99	2.98	2.98	2.98	2.98	2.98
	Total RRADs	**8.42**	**8.49**	**10.92**	**11.50**	**5.05**	**5.97**	**5.97**	**5.97**	**5.97**	**5.97**
Construction											
Appropriated	Multiple	8.58	1.22	0.70	6.26	15.88	1.95	1.95	1.95	1.95	1.95
Prepayment	Multiple	3.62	11.69	6.50	8.38	6.08	3.43	3.43	3.43	3.43	3.43
	Total Construction	**12.20**	**12.91**	**7.20**	**14.64**	**21.96**	**5.38**	**5.38**	**5.38**	**5.38**	**5.38**
Purchase Power & Wheeling											
N/FGPD PPW W	Replace Substation Equip	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total PPW	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
GRAND TOTAL - FTE		**110.55**	**111.78**	**114.66**	**118.21**	**118.26**	**104.09**	**104.09**	**104.09**	**104.09**	**104.09**